

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSPTAJRK1626

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

\* \* \* \* \* Welcome to STN International \* \* \* \* \*

NEWS	1		Web Page for STN Seminar Schedule - N. America
NEWS	2	DEC 01	ChemPort single article sales feature unavailable
NEWS	3	FEB 02	Simultaneous left and right truncation (SLART) added for CERAB, COMPUAB, ELCOM, and SOLIDSTATE
NEWS	4	FEB 02	GENBANK enhanced with SET PLURALS and SET SPELLING
NEWS	5	FEB 06	Patent sequence location (PSL) data added to USGENE
NEWS	6	FEB 10	COMPENDEX reloaded and enhanced
NEWS	7	FEB 11	WTEXTILES reloaded and enhanced
NEWS	8	FEB 19	New patent-examiner citations in 300,000 CA/CAPLUS patent records provide insights into related prior art
NEWS	9	FEB 19	Increase the precision of your patent queries -- use terms from the IPC Thesaurus, Version 2009.01
NEWS	10	FEB 23	Several formats for image display and print options discontinued in USPATFULL and USPAT2
NEWS	11	FEB 23	MEDLINE now offers more precise author group fields and 2009 MeSH terms
NEWS	12	FEB 23	TOXCENTER updates mirror those of MEDLINE - more precise author group fields and 2009 MeSH terms
NEWS	13	FEB 23	Three million new patent records blast AEROSPACE into STN patent clusters
NEWS	14	FEB 25	USGENE enhanced with patent family and legal status display data from INPADOCDB
NEWS	15	MAR 06	INPADOCDB and INPAFAMDB enhanced with new display formats
NEWS	16	MAR 11	EPFULL backfile enhanced with additional full-text applications and grants
NEWS	17	MAR 11	ESBIOBASE reloaded and enhanced
NEWS	18	MAR 20	CAS databases on STN enhanced with new super role for nanomaterial substances
NEWS	19	MAR 23	CA/CAPLUS enhanced with more than 250,000 patent equivalents from China
NEWS	20	MAR 30	IMSPATENTS reloaded and enhanced
NEWS	21	APR 03	CAS coverage of exemplified prophetic substances enhanced
NEWS	22	APR 07	STN is raising the limits on saved answers
NEWS	23	APR 24	CA/CAPLUS now has more comprehensive patent assignee information
NEWS	24	APR 26	USPATFULL and USPAT2 enhanced with patent assignment/reassignment information
NEWS	25	APR 28	CAS patent authority coverage expanded

NEWS 26 APR 28 ENCOMPLIT/ENCOMPLIT2 search fields enhanced  
 NEWS 27 APR 28 Limits doubled for structure searching in CAS  
 REGISTRY  
 NEWS 28 MAY 08 STN Express, Version 8.4, now available  
 NEWS EXPRESS MAY 08 09 CURRENT WINDOWS VERSION IS V8.4,  
 AND CURRENT DISCOVER FILE IS DATED 06 APRIL 2009.  
 NEWS HOURS STN Operating Hours Plus Help Desk Availability  
 NEWS LOGIN Welcome Banner and News Items

Enter NEWS followed by the item number or name to see news on that specific topic.

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\* \* \* \* \* STN Columbus \* \* \* \* \*

FILE 'HOME' ENTERED AT 19:15:35 ON 10 MAY 2009

=> file reg		
COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	0.22	0.22

FILE 'REGISTRY' ENTERED AT 19:16:01 ON 10 MAY 2009  
 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
 PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
 COPYRIGHT (C) 2009 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 8 MAY 2009 HIGHEST RN 1144618-76-7  
 DICTIONARY FILE UPDATES: 8 MAY 2009 HIGHEST RN 1144618-76-7

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 9, 2009.

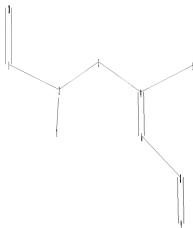
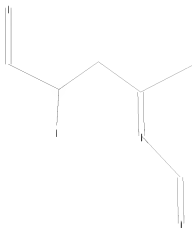
Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stdoc/properties.html>

=>  
 Uploading C:\Program Files\Stnexp\Queries\10587075\Struc 2.str

10587075.trn



```

chain nodes :
1  2  3  4  5  6  7  8  9 10
chain bonds :
1-10 1-2 2-3 2-7 3-4 4-5 4-6 6-8 8-9
exact/norm bonds :
1-10 2-7 4-6 6-8 8-9
exact bonds :
1-2 2-3 3-4 4-5

```

```

Match level :
1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
10:CLASS

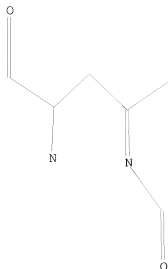
```

L1 STRUCTURE UPLOADED

=> d

L1 HAS NO ANSWERS

L1 STR



Structure attributes must be viewed using STN Express query preparation.

```
=> l1
SAMPLE SEARCH INITIATED 19:16:13 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 17626 TO ITERATE

11.3% PROCESSED      2000 ITERATIONS      0 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01
```

```
FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH  **COMPLETE**
PROJECTED ITERATIONS:   344568 TO 360472
PROJECTED ANSWERS:      0 TO      0
```

L2 0 SEA SSS SAM L1

```
=> l1 full
FULL SEARCH INITIATED 19:16:17 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 355951 TO ITERATE
```

```
100.0% PROCESSED 355951 ITERATIONS      0 ANSWERS
SEARCH TIME: 00.00.05
```

L3 0 SEA SSS FUL L1

```
=> log h
COST IN U.S. DOLLARS      SINCE FILE      TOTAL
                        ENTRY      SESSION
FULL ESTIMATED COST      185.88      186.10
```

SESSION WILL BE HELD FOR 120 MINUTES  
STN INTERNATIONAL SESSION SUSPENDED AT 19:16:40 ON 10 MAY 2009

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSPTAJRK1626

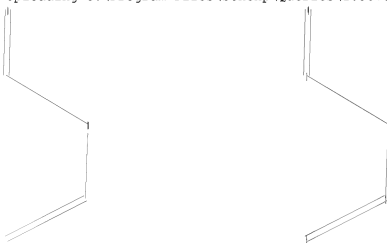
PASSWORD:

\*\*\*\*\* RECONNECTED TO STN INTERNATIONAL \*\*\*\*\*  
SESSION RESUMED IN FILE 'REGISTRY' AT 19:34:54 ON 10 MAY 2009  
FILE 'REGISTRY' ENTERED AT 19:34:54 ON 10 MAY 2009  
COPYRIGHT (C) 2009 American Chemical Society (ACS)

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
FULL ESTIMATED COST	ENTRY	SESSION
	185.88	186.10

=>

Uploading C:\Program Files\Stnexp\Queries\10587075\Struc 3.str



chain nodes :  
1 2 3 4 5  
chain bonds :  
1-2 1-4 2-3 3-5  
exact/norm bonds :  
1-2 1-4 2-3  
exact bonds :  
3-5

Match level :  
1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS

L4 STRUCTURE UPLOADED

10587075.trn

=> d  
L4 HAS NO ANSWERS  
L4 STR



Structure attributes must be viewed using STN Express query preparation.

=> l4  
SAMPLE SEARCH INITIATED 19:35:27 FILE 'REGISTRY'  
SAMPLE SCREEN SEARCH COMPLETED - 39040 TO ITERATE  
  
5.1% PROCESSED 2000 ITERATIONS 50 ANSWERS  
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)  
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*  
PROJECTED ITERATIONS: 768988 TO 792612  
PROJECTED ANSWERS: 109469 TO 118523

L5 50 SEA SSS SAM L4

=> l4 full  
FULL SEARCH INITIATED 19:35:30 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 785185 TO ITERATE

100.0% PROCESSED 785185 ITERATIONS 110354 ANSWERS  
SEARCH TIME: 00.00.06

L6 110354 SEA SSS FUL L4

=>  
Uploading C:\Program Files\Stnexp\Queries\10587075\Struc 4.str

10587075.trn

chain nodes :  
1 2  
chain bonds :  
1-2  
exact/norm bonds :  
1-2

Match level :  
1:CLASS 2:CLASS

L7 STRUCTURE UPLOADED

=> d  
L7 HAS NO ANSWERS  
L7 STR

N

Structure attributes must be viewed using STN Express query preparation.

=> 17  
SAMPLE SEARCH INITIATED 19:35:51 FILE 'REGISTRY'  
SAMPLE SCREEN SEARCH COMPLETED - 1874427 TO ITERATE

0.1% PROCESSED 2000 ITERATIONS 50 ANSWERS  
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)  
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*INCOMPLETE\*\*  
BATCH \*\*INCOMPLETE\*\*  
PROJECTED ITERATIONS: 37422142 TO 37554938  
PROJECTED ANSWERS: 17118752 TO 17220736

L8 50 SEA SSS SAM L7

=>  
Uploading C:\Program Files\Stnexp\Queries\10587075\Struc 5.str

chain nodes :  
1 2 3  
chain bonds :

10587075.trn

1-2 1-3  
exact/norm bonds :  
1-2  
exact bonds :  
1-3

Match level :  
1:CLASS 2:CLASS 3:CLASS

L9 STRUCTURE UPLOADED

=> d  
L9 HAS NO ANSWERS  
L9 STR



Structure attributes must be viewed using STN Express query preparation.

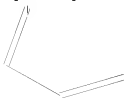
=> 19  
SAMPLE SEARCH INITIATED 19:36:28 FILE 'REGISTRY'  
SAMPLE SCREEN SEARCH COMPLETED - 1853194 TO ITERATE

0.1% PROCESSED 2000 ITERATIONS 50 ANSWERS  
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)  
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*INCOMPLETE\*\*  
BATCH \*\*INCOMPLETE\*\*  
PROJECTED ITERATIONS: 36997661 TO 37130099  
PROJECTED ANSWERS: 9245416 TO 9323588

L10 50 SEA SSS SAM L9

=>  
Uploading C:\Program Files\Stnexp\Queries\10587075\Struc 6.str



chain nodes :  
1 2 3 4  
chain bonds :



1-2 1-3 3-4  
exact/norm bonds :  
1-2 3-4  
exact bonds :  
1-3

Match level :  
1:CLASS 2:CLASS 3:CLASS 4:CLASS

L11 STRUCTURE UPLOADED

=> d  
L11 HAS NO ANSWERS  
L11 STR



Structure attributes must be viewed using STN Express query preparation.

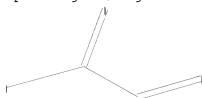
=> l11  
SAMPLE SEARCH INITIATED 19:37:02 FILE 'REGISTRY'  
SAMPLE SCREEN SEARCH COMPLETED - 495814 TO ITERATE

0.4% PROCESSED 2000 ITERATIONS 50 ANSWERS  
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)  
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*INCOMPLETE\*\*  
BATCH \*\*INCOMPLETE\*\*  
PROJECTED ITERATIONS: 9876015 TO 9956545  
PROJECTED ANSWERS: 344080 TO 359974

L12 50 SEA SSS SAM L11

=>  
Uploading C:\Program Files\Stnexp\Queries\10587075\Struc 7.str

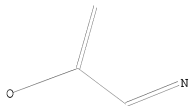


```
chain nodes :  
1  2  3  4  5  
chain bonds :  
1-2  1-3  3-4  3-5  
exact/norm bonds :  
1-2  3-4  3-5  
exact bonds :  
1-3
```

```
Match level :  
1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS
```

L13        STRUCTURE UPLOADED

```
=> d  
L13 HAS NO ANSWERS  
L13                STR
```



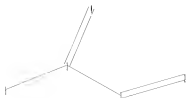
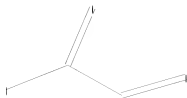
Structure attributes must be viewed using STN Express query preparation.

```
=> l13  
SAMPLE SEARCH INITIATED 19:37:35 FILE 'REGISTRY'  
SAMPLE SCREEN SEARCH COMPLETED -    201443 TO ITERATE  
  
     1.0% PROCESSED        2000 ITERATIONS                    50 ANSWERS  
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)  
SEARCH TIME: 00.00.01
```

```
FULL FILE PROJECTIONS:    ONLINE    **INCOMPLETE**  
                         BATCH    **INCOMPLETE**  
PROJECTED ITERATIONS:        4002437 TO 4055283  
PROJECTED ANSWERS:            110279 TO 119365
```

L14            50 SEA SSS SAM L13

```
=>  
Uploading C:\Program Files\Stnexp\Queries\10587075\Struc 8.str
```

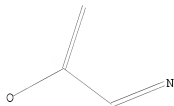


```
chain nodes :  
1 2 3 4 5  
chain bonds :  
1-2 1-3 3-4 3-5  
exact/norm bonds :  
1-2 3-4 3-5  
exact bonds :  
1-3
```

```
Match level :  
1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS
```

L15 STRUCTURE UPLOADED

```
=> d  
L15 HAS NO ANSWERS  
L15 STR
```

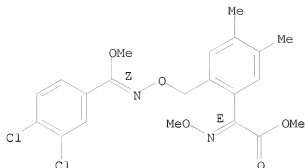


Structure attributes must be viewed using STN Express query preparation.

```
=> d scan l14
```

```
L14 50 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN  
IN INDEX NAME NOT YET ASSIGNED  
MF C21 H22 C12 N2 O5
```

Double bond geometry as shown.



**\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\***

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

=> file reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

375.12

375.34

FILE 'REGISTRY' ENTERED AT 19:39:39 ON 10 MAY 2009

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STRUCTURE FILE UPDATES: 8 MAY 2009 HIGHEST RN 1144618-76-7

DICTIONARY FILE UPDATES: 8 MAY 2009 HIGHEST RN 1144618-76-7

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 9, 2009.

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stdnoc/properties.html>

=> l6 and copper

372067 COPPER

L16

12 L6 AND COPPER

=> d ibib abs hitstr 1-12

'IBIB' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'

10587075.trn

'ABS' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'  
'HITSTR' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'

The following are valid formats:

Substance information can be displayed by requesting individual fields or predefined formats. The predefined substance formats are: (RN = CAS Registry Number)

REG - RN  
SAM - Index Name, MF, and structure - no RN  
FIDE - All substance data, except sequence data  
IDE - FIDE, but only 50 names  
SQIDE - IDE, plus sequence data  
SQIDE3 - Same as SQIDE, but 3-letter amino acid codes are used  
SQD - Protein sequence data, includes RN  
SQD3 - Same as SQD, but 3-letter amino acid codes are used  
SQN - Protein sequence name information, includes RN  
  
EPROP - Table of experimental properties  
PPROP - Table of predicted properties  
PROP - EPROP, ETAG, PPROP and SPEC

Any CA File format may be combined with any substance format to obtain CA references citing the substance. The substance formats must be cited first. The CA File predefined formats are:

ABS -- Abstract  
APPS -- Application and Priority Information  
BIB -- CA Accession Number, plus Bibliographic Data  
CAN -- CA Accession Number  
CBIB -- CA Accession Number, plus Bibliographic Data (compressed)  
IND -- Index Data  
IPC -- International Patent Classification  
PATS -- PI, SO  
STD -- BIB, IPC, and NCL  
  
IABS -- ABS, indented, with text labels  
IBIB -- BIB, indented, with text labels  
ISTD -- STD format, indented  
  
OBIB ----- AN, plus Bibliographic Data (original)  
OIBIB ----- OBIB, indented with text labels  
  
SBIB ----- BIB, no citations  
SIBIB ----- IBIB, no citations

The ALL format gives FIDE BIB ABS IND RE, plus sequence data when it is available.

The MAX format is the same as ALL.

The IALL format is the same as ALL with BIB ABS and IND indented, with text labels.

For additional information, please consult the following help messages:

HELP DFIELDS -- To see a complete list of individual display fields.

HELP FORMATS -- To see detailed descriptions of the predefined formats.

ENTER DISPLAY FORMAT (IDE):

ENTER DISPLAY FORMAT (IDE):reg

1	RN	84518-21-8	REGISTRY
2	RN	84433-35-2	REGISTRY
3	RN	84433-34-1	REGISTRY
4	RN	63986-67-4	REGISTRY
5	RN	58850-31-0	REGISTRY
6	RN	24761-97-5	REGISTRY
7	RN	21437-34-3	REGISTRY
8	RN	20704-23-8	REGISTRY
9	RN	20704-22-7	REGISTRY
10	RN	20704-21-6	REGISTRY
11	RN	18498-00-5	REGISTRY
12	RN	1865-27-6	REGISTRY

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

8.83

384.17

FILE 'CAPLUS' ENTERED AT 19:40:18 ON 10 MAY 2009

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FILE COVERS 1907 - 10 May 2009 VOL 150 ISS 20

FILE LAST UPDATED: 8 May 2009 (20090508/ED)

REVISED CLASS FIELDS (/NCL) LAST RELOADED: Feb 2009

USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Feb 2009

CAPLUS now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2008.

CAS Information Use Policies apply and are available at:

<http://www.cas.org/legal/infopolicy.html>

This file contains CAS Registry Numbers for easy and accurate

=> 16 and copper

23077 L6

1042804 COPPER

L17

406 L6 AND COPPER

=> 117 and imin?

100576 IMIN?

L18 26 L17 AND IMIN?

=> d ibib abs hitstr 1-26

L18 ANSWER 1 OF 26 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2007:532529 CAPLUS

DOCUMENT NUMBER: 147:143304

TITLE: Synthesis of substituted pyridines and quinolines

AUTHOR(S): Hill, Matthew D.; Movassaghi, Mohammad

CORPORATE SOURCE: Department of Chemistry, Massachusetts Institute of Technology, Cambridge, MA, 02139, USA

SOURCE: Synthesis (2007), (7), 1115-1119

CODEN: SYNTBF; ISSN: 0039-7881

PUBLISHER: Georg Thieme Verlag

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 147:143304

AB A variety of N-vinyl and N-aryl amides were converted to the corresponding pyridine and quinoline derivs., resp. Amide activation and nucleophilic addition of copper(I) (trimethylsilyl)acetylide efficiently provided the desired alkynyl imines. Ruthenium-catalyzed protodesilylation and cycloisomerization of these imines gave the corresponding aza heterocycles.

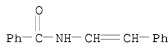
IT 49747-42-4 860723-95-1 887236-62-6

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of pyridines and quinolines by addition of copper silylacetylide to N-vinyl and N-aryl amides, ruthenium-catalyzed protodesilylation, and cycloisomerization)

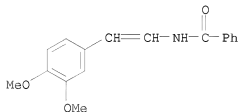
RN 49747-42-4 CAPLUS

CN Benzamide, N-(2-phenylethenyl)- (CA INDEX NAME)



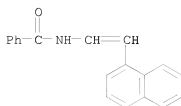
RN 860723-95-1 CAPLUS

CN Benzamide, N-[2-(3,4-dimethoxyphenyl)ethenyl]- (CA INDEX NAME)



RN 887236-62-6 CAPLUS

CN Benzamide, N-[2-(1-naphthalenyl)ethenyl]- (CA INDEX NAME)



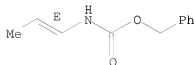
REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 2 OF 26 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2006:1336881 CAPLUS  
 DOCUMENT NUMBER: 146:251557  
 TITLE: Catalytic asymmetric amination of enecarbamates  
 AUTHOR(S): Matsubara, Ryosuke; Kobayashi, Shu  
 CORPORATE SOURCE: Graduate School of Pharmaceutical Sciences, University  
 of Tokyo, Tokyo, 113-0033, Japan  
 SOURCE: Angewandte Chemie, International Edition (2006),  
 45(47), 7993-7995  
 CODEN: ACIEF5; ISSN: 1433-7851  
 PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 146:251557  
 GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB Azodicarboxylates I (R = i-Pr, Me, Et, Bn) react with various enecarbamates, e.g. II, derived from aromatic and aliphatic ketones and aldehydes, via copper-catalyzed asym. amination, to provide acylimines, e.g. III, ketones, e.g. IV, and diamines, e.g. V, in good yields with high enantioselectivity. The catalyst loading necessary for high enantioselectivity was generally low, with 0.2 mol% catalyst sufficient in some cases. The transition-state model was also discussed in order to explain the stereoselectivity.  
 IT 260967-14-4 750596-67-9 750596-68-0  
 750596-69-1 750596-71-5  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (asym. synthesis of acylimines, ketones and diamines via copper  
 -catalyzed asym. amination of enecarbamates with azodicarboxylates)  
 RN 260967-14-4 CAPLUS  
 CN Carbamic acid, N-(1E)-1-propen-1-yl-, phenylmethyl ester (CA INDEX NAME)

Double bond geometry as shown.

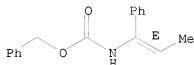




RN 750596-67-9 CAPLUS

CN Carbamic acid, N-[(1E)-1-phenyl-1-propen-1-yl]-, phenylmethyl ester (CA INDEX NAME)

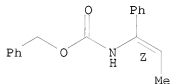
Double bond geometry as shown.



RN 750596-68-0 CAPLUS

CN Carbamic acid, N-[(1Z)-1-phenyl-1-propen-1-yl]-, phenylmethyl ester (CA INDEX NAME)

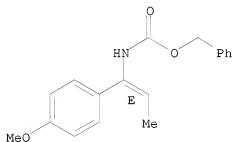
Double bond geometry as shown.



RN 750596-69-1 CAPLUS

CN Carbamic acid, N-[(1E)-1-(4-methoxyphenyl)-1-propen-1-yl]-, phenylmethyl ester (CA INDEX NAME)

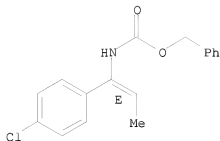
Double bond geometry as shown.



RN 750596-71-5 CAPLUS

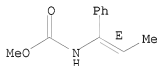
CN Carbamic acid, N-[(1E)-1-(4-chlorophenyl)-1-propen-1-yl]-, phenylmethyl ester (CA INDEX NAME)

Double bond geometry as shown.



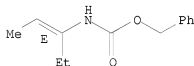
IT 79152-68-4P 750596-75-9P 925670-22-0P  
 925670-23-1P 925670-24-2P 925670-25-3P  
 925670-26-4P 925670-27-5P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (asym. synthesis of acylimines, ketones and diamines via copper  
 -catalyzed asym. amination of enecarbamates with azodicarboxylates)  
 RN 79152-68-4 CAPLUS  
 CN Carbamic acid, N-[(1E)-1-phenyl-1-propen-1-yl]-, methyl ester (CA INDEX  
 NAME)

Double bond geometry as shown.



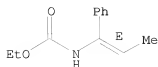
RN 750596-75-9 CAPLUS  
 CN Carbamic acid, N-[(1E)-1-ethyl-1-propen-1-yl]-, phenylmethyl ester (CA  
 INDEX NAME)

Double bond geometry as shown.



RN 925670-22-0 CAPLUS  
 CN Carbamic acid, N-[(1E)-1-phenyl-1-propen-1-yl]-, ethyl ester (CA INDEX  
 NAME)

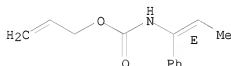
Double bond geometry as shown.



RN 925670-23-1 CAPLUS

CN Carbamic acid, N-[(1E)-1-phenyl-1-propen-1-yl]-, 2-propen-1-yl ester (CA INDEX NAME)

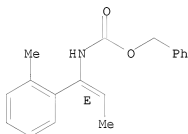
Double bond geometry as shown.



RN 925670-24-2 CAPLUS

CN Carbamic acid, N-[(1E)-1-(2-methylphenyl)-1-propen-1-yl]-, phenylmethyl ester (CA INDEX NAME)

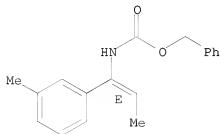
Double bond geometry as shown.



RN 925670-25-3 CAPLUS

CN Carbamic acid, N-[(1E)-1-(3-methylphenyl)-1-propen-1-yl]-, phenylmethyl ester (CA INDEX NAME)

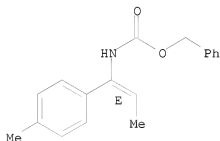
Double bond geometry as shown.



RN 925670-26-4 CAPLUS

CN Carbamic acid, N-[(1E)-1-(4-methylphenyl)-1-propen-1-yl]-, phenylmethyl ester (CA INDEX NAME)

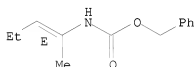
Double bond geometry as shown.



RN 925670-27-5 CAPLUS

CN Carbamic acid, N-[(1E)-1-methyl-1-buten-1-yl]-, phenylmethyl ester (CA INDEX NAME)

Double bond geometry as shown.



REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 3 OF 26 CAPLUS COPYRIGHT 2009 ACS ON STN

ACCESSION NUMBER: 2006:1079247 CAPLUS

DOCUMENT NUMBER: 146:8035

TITLE: High turnover frequency observed in catalytic enantioselective additions of enecarbamates and enamides to iminophosphonates

AUTHOR(S): Kiyohara, Hiroshi; Matsubara, Ryosuke; Kobayashi, Shu  
CORPORATE SOURCE: Graduate School of Pharmaceutical Sciences, University of Tokyo, Tokyo, Japan

SOURCE: Organic Letters (2006), 8(23), 5333-5335  
CODEN: ORLEF7; ISSN: 1523-7060

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 146:8035

AB Chiral  $\alpha$ -aminophosphonates were prepared by copper /diamine-catalyzed asym. addition fo enamides to iminomethylphosphonates. Reaction of (EtO)2POCH:NX (1, X = 2,2,2-trichloroethoxycarbonyl, Troc) with CH2:C(Ar)NHCHz catalyzed by Cu(OTf)2/(R,R)-Ar1CH2NHCHPhCHPhNHCH2Ar1 (Ar1 = 1-naphthyl, Ph) afforded chiral  $\alpha$ -aminophosphonates (EtO)2P(O)CH(NHX)CH2COAr (4a-f, Ar = Ph, 4-MeC6H4, 4-ClC6H4, 2-naphthalenyl, 3-MeC6H4). In the addition reactions, extremely high turnover frequency of the catalyst was observed in comparison

with that of silicon enolate addition reactions. This is presumably due to fast transfer of the proton that locates on the nucleophiles.

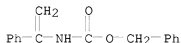
IT 697301-71-6 697301-72-7 697301-73-8  
697301-74-9 697301-75-0 915748-71-9  
915748-72-0

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of chiral  $\alpha$ -aminophosphonates by asym. addition of enamides with iminophosphonates catalyzed by copper-diamine complexes)

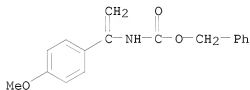
RN 697301-71-6 CAPLUS

CN Carbamic acid, N-(1-phenylethenyl)-, phenylmethyl ester (CA INDEX NAME)



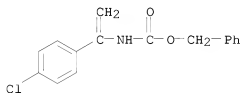
RN 697301-72-7 CAPLUS

CN Carbamic acid, N-[1-(4-methoxyphenyl)ethenyl]-, phenylmethyl ester (CA INDEX NAME)



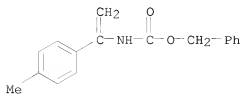
RN 697301-73-8 CAPLUS

CN Carbamic acid, N-[1-(4-chlorophenyl)ethenyl]-, phenylmethyl ester (CA INDEX NAME)

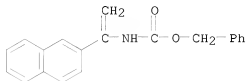


RN 697301-74-9 CAPLUS

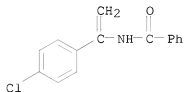
CN Carbamic acid, N-[1-(4-methylphenyl)ethenyl]-, phenylmethyl ester (CA INDEX NAME)



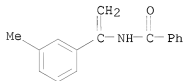
RN 697301-75-0 CAPLUS  
CN Carbamic acid, N-[1-(2-naphthalenyl)ethenyl]-, phenylmethyl ester (CA INDEX NAME)



RN 915748-71-9 CAPLUS  
CN Benzamide, N-[1-(4-chlorophenyl)ethenyl]- (CA INDEX NAME)

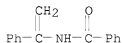


RN 915748-72-0 CAPLUS  
CN Benzamide, N-[1-(3-methylphenyl)ethenyl]- (CA INDEX NAME)



IT 857489-17-9P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation of chiral  $\alpha$ -aminophosphonates by asym. addition of enamides with iminophosphonates catalyzed by copper-diamine complexes)

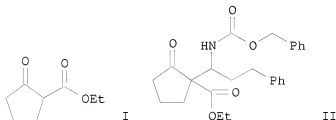
RN 857489-17-9 CAPLUS  
CN Benzamide, N-(1-phenylethenyl)- (CA INDEX NAME)



REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

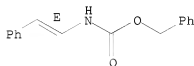
L18 ANSWER 4 OF 26 CAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 2006:984204 CAPLUS

DOCUMENT NUMBER: 145:505113  
 TITLE: Ene Carbamates as Imine Surrogates:  
 Nucleophilic Addition of 1,3-Dicarbonyl Compounds to  
 Ene Carbamates  
 AUTHOR(S): Kobayashi, Shu; Gustafsson, Tomas; Shimizu, Yusuke;  
 Kiyohara, Hiroshi; Matsubara, Ryosuke  
 CORPORATE SOURCE: Graduate School of Pharmaceutical Sciences, University  
 of Tokyo, Tokyo, Japan  
 SOURCE: Organic Letters (2006), 8(21), 4923-4925  
 CODEN: ORLEF7; ISSN: 1523-7060  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 145:505113  
 GI



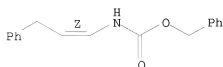
AB Novel Mannich-type reactions of 1,3-dicarbonyl compds. with ene carbamates were developed. Thus, reaction of the oxocyclopentanecarboxylate I in 1,2-dichloroethane containing  $\text{Cu}(\text{O}_2\text{CCF}_3)_2$  with (Z)- $\text{PhCH}_2\text{CH}=\text{CHNHC(=O)OCH}_2\text{CH}_2\text{Ph}$  over 12 h gave 89% (oxocyclopentyl)phenylpropylcarbamate II. Stable and storable ene carbamates act as surrogates of aliphatic aldehyde-derived imines, which are known to be difficult to isolate and store.  
 IT 88425-24-5 260967-07-5 914396-43-3  
 914396-45-5 914396-48-8  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation of (alkoxycarbonylamino)methyl dicarbonyl compds. via Mannich-type addition of ene carbamates to dicarbonyl compds.)  
 RN 88425-24-5 CAPLUS  
 CN Carbamic acid, N-[(1E)-2-phenylethenyl]-, phenylmethyl ester (CA INDEX NAME)

Double bond geometry as shown.



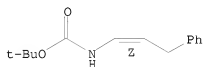
RN 260967-07-5 CAPLUS  
 CN Carbamic acid, [(1Z)-3-phenyl-1-propenyl]-, phenylmethyl ester (9CI) (CA INDEX NAME)

Double bond geometry as shown.



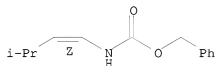
RN 914396-43-3 CAPLUS  
CN Carbamic acid, [(1Z)-3-phenyl-1-propenyl]-, 1,1-dimethylethyl ester (9CI)  
(CA INDEX NAME)

Double bond geometry as shown.



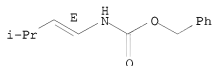
RN 914396-45-5 CAPLUS  
CN Carbamic acid, [(1Z)-3-methyl-1-butenyl]-, phenylmethyl ester (9CI) (CA  
INDEX NAME)

Double bond geometry as shown.



RN 914396-48-8 CAPLUS  
CN Carbamic acid, [(1E)-3-methyl-1-butenyl]-, phenylmethyl ester (9CI) (CA  
INDEX NAME)

Double bond geometry as shown.



REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 5 OF 26 CAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 2006:787790 CAPLUS  
DOCUMENT NUMBER: 145:230417  
TITLE: Preparation of  $\delta$ -iminomalonic acid  
esters as  $\delta$ -substituted carboxylic acids with



INVENTOR(S): chiral copper catalysts  
 Kobayashi, Shu; Kawai, Nobuyuki  
 PATENT ASSIGNEE(S): Japan Science and Technology Agency, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 19 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

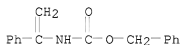
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2006206550	A	20060810	JP 2005-24534	20050131

PRIORITY APPLN. INFO.: JP 2005-24534 20050131  
 OTHER SOURCE(S): MARPAT 145:230417

AB Title esters are prepared by treatment of enecarbamates with alkylidene malonate esters in the presence of Cu catalysts. Thus, PhCH<sub>2</sub>O<sub>2</sub>CNHCPh:CH<sub>2</sub> was treated with MeCH:C(CO<sub>2</sub>Ph)<sub>2</sub> and Cu catalyst [prepared from Cu(OTf)<sub>2</sub> and trans-ZnHCHPhCHPhNHZ (Z = β-naphthylmethyl)] and the resulting imine was hydrolyzed to give 98% PhCOCH<sub>2</sub>CHMeCH(CO<sub>2</sub>Ph)<sub>2</sub> with 76% ee.

IT 697301-71-6  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation of optically active δ-substituted carboxylic acids by Michael addition via iminomalonates)

RN 697301-71-6 CAPLUS  
 CN Carbamic acid, N-(1-phenylethenyl)-, phenylmethyl ester (CA INDEX NAME)

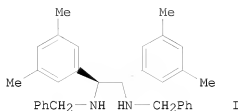


L18 ANSWER 6 OF 26 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2006:787692 CAPLUS  
 DOCUMENT NUMBER: 145:230421  
 TITLE: Enantioselective nucleophilic addition of enamides to azo compounds  
 INVENTOR(S): Kobayashi, Shu  
 PATENT ASSIGNEE(S): Japan Science and Technology Agency, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 20 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2006206554	A	20060810	JP 2005-24614	20050131

PRIORITY APPLN. INFO.: JP 2005-24614 20050131  
 OTHER SOURCE(S): MARPAT 145:230421

GI



AB Optically active iminohydrazines are prepared by nucleophilic addition of enamides to N:N groups of azo compds. in the presence of chiral Cu catalysts. Optically active ketohydrazines, (acylamino)hydrazines, and diamines are prepared from the iminohydrazines. Thus, iso-PrO<sub>2</sub>CN:NCO<sub>2</sub>-iso-Pr was treated with MeCH:CP<sub>h</sub>NHCO<sub>2</sub>CH<sub>2</sub>Ph in the presence of catalyst solution prepared from I and Cu(OTf)<sub>2</sub> in MePh to give 96% I with 97% ee.

IT 750596-67-9 750596-68-0

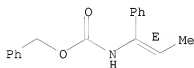
RL: RCT (Reactant); RACT (Reactant or reagent)

(enantioselective nucleophilic addition of enamides to azo compds. with chiral Cu catalysts)

RN 750596-67-9 CAPLUS

CN Carbamic acid, N-[(1E)-1-phenyl-1-propen-1-yl]-, phenylmethyl ester (CA INDEX NAME)

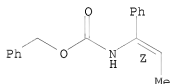
Double bond geometry as shown.



RN 750596-68-0 CAPLUS

CN Carbamic acid, N-[(1Z)-1-phenyl-1-propen-1-yl]-, phenylmethyl ester (CA INDEX NAME)

Double bond geometry as shown.



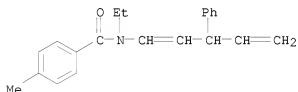
L18 ANSWER 7 OF 26 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2006:333966 CAPLUS

DOCUMENT NUMBER: 145:27389

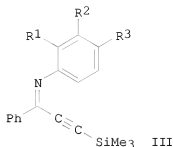
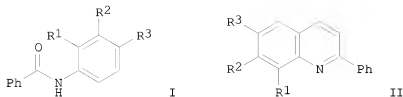
TITLE: General Approach to the Coupling of Organoindium Reagents with Imines via Copper

Catalysis  
 AUTHOR(S): Black, Daniel A.; Arndtsen, Bruce A.  
 CORPORATE SOURCE: Department of Chemistry, McGill University, Montreal,  
 QC, H3A 2K6, Can.  
 SOURCE: Organic Letters (2006), 8(10), 1991-1993  
 CODEN: ORLEF7; ISSN: 1523-7060  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 145:27389  
 AB A copper-catalyzed three-component coupling of organoindium  
 reagents with imines and acid chlorides is described. This mild  
 carbon-carbon bond forming reaction requires only one-third of an equivalent  
 of indium reagent to proceed in high yield, with the sole byproduct being  
 indium trichloride. The reaction demonstrates broad generality, with  
 aryl-, heteroaryl-, vinyl-, and alkylindiums, as well as functionalized  
 imines and acid chlorides, all providing  $\alpha$ -substituted  
 amides or N-protected amines in a single step.  
 IT 858126-59-7P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of amines by copper-catalyzed three-component  
 coupling of organoindium reagents with imines and acid  
 chlorides)  
 RN 858126-59-7 CAPLUS  
 CN Benzamide, N-ethyl-4-methyl-N-(3-phenyl-1,4-pentadien-1-yl)- (CA INDEX  
 NAME)



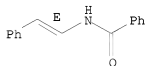
REFERENCE COUNT: 53 THERE ARE 53 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 8 OF 26 CAPLUS COPYRIGHT 2009 ACS ON STN  
 ACCESSION NUMBER: 2006:266204 CAPLUS  
 DOCUMENT NUMBER: 144:488547  
 TITLE: Synthesis of Substituted Pyridine Derivatives via the  
 Ruthenium-Catalyzed Cycloisomerization of  
 3-Azadienynes  
 AUTHOR(S): Movassaghi, Mohammad; Hill, Matthew D.  
 CORPORATE SOURCE: Department of Chemistry, Massachusetts Institute of  
 Technology, Cambridge, MA, 02139, USA  
 SOURCE: Journal of the American Chemical Society (2006),  
 128(14), 4592-4593  
 CODEN: JACSAT; ISSN: 0002-7863  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 144:488547  
 GI

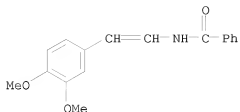


- AB A two-step conversion of various N-vinyl and N-aryl amides, e.g. I (R<sub>1</sub>, R<sub>3</sub> = H, MeO; R<sub>2</sub> = H, F3C), to the corresponding substituted pyridines and quinolines, e.g. II, resp., is described. The process involves the direct conversion of amides, including sensitive N-vinyl amides, to the corresponding trimethylsilyl alkynyl imines, e.g. III, followed by a ruthenium-catalyzed protodesilylation and cycloisomerization. A wide range of new alkynyl imines are prepared and readily converted to the corresponding azaheterocycles.
- IT 78007-47-3 860723-95-1 887236-62-6  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation of substituted and heterocycle-fused pyridines and quinolines via coupling of aromatic amides with copper acetylide and ruthenium-catalyzed cycloisomerization of azadienynes)
- RN 78007-47-3 CAPLUS
- CN Benamide, N-[(1E)-2-phenylethenyl]- (CA INDEX NAME)

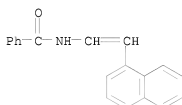
Double bond geometry as shown.



- RN 860723-95-1 CAPLUS
- CN Benamide, N-[2-(3,4-dimethoxyphenyl)ethenyl]- (CA INDEX NAME)



RN 887236-62-6 CAPLUS  
 CN Benzamide, N-[2-(1-naphthalenyl)ethenyl]- (CA INDEX NAME)



REFERENCE COUNT: 71 THERE ARE 71 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 9 OF 26 CAPLUS COPYRIGHT 2009 ACS ON STN  
 ACCESSION NUMBER: 2005:1211474 CAPLUS  
 DOCUMENT NUMBER: 143:460279  
 TITLE: Terpenoid-based cycloolefin diphosphine ligands for transition metal catalyzed asymmetric reactions and a process for preparation thereof  
 INVENTOR(S): Kadyrov, Renat; Almendra Perea, Juan Jose; Monsees, Axel; Riermeier, Thomas; Iladinov, Ilias  
 PATENT ASSIGNEE(S): Degussa A.-G., Germany  
 SOURCE: Eur. Pat. Appl., 45 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1595888	A1	20051116	EP 2004-11152	20040511
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
CA 2559242	A1	20051117	CA 2005-2559242	20050414
WO 2005108407	A1	20051117	WO 2005-EP3932	20050414
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				

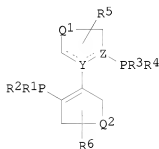
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1745058	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR	A1	200701124	EP	2005-731071	20050414
CN 1946730		A	20070411	CN	2005-80012209	20050414
BR 2005011027		A	20071127	BR	2005-11027	20050414
JP 2007537171		T	20071220	JP	2007-511911	20050414
MX 20080306264		A1	20081211	US	2006-579626	20061106
MX 2006012903		A	20070126	MX	2006-12903	20061107
IN 2006KN03265		A	20070608	IN	2006-KN3265	20061108
KR 2007007923		A	20070116	KR	2006-723627	20061110

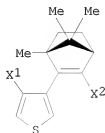
PRIORITY APPLN. INFO.:

EP 2004-11152  
WO 2005-EP3932  
CASREACT 143:460279; MARPAT 143:460279

OTHER SOURCE(S) :  
GI



I

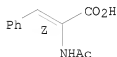


II

AB Chiral diphosphines I [ring Q1 = optionally unsatd. 4-8-membered (non)aromatic (azahetero)cyclic or polycyclic, ring Q2 = partially saturated non-aromatic 5-8-membered (poly)cyclic or heterocyclic moiety; both rings optionally substituted by aliphatic, aromatic or functional substituents; R1, R2, R3, R4 = alkyl, aryl, aralkyl, alkenyl, alkynyl, alkoxy, aryloxy alkylthio, (un)substituted (hetero)cyclyl; R1-R2 or R3-R4 = 3-8-membered (un)substituted (hetero)cyclyl, (hetero)aromatic moiety; phosphorus atoms optionally are chiral], useful as ligands for transition-metal-catalyzed asym. hydrogenation, alkylation, hydrosilylation, isomerization and other reactions, were prepared by reaction of protected organometallic derivs. of the ring Q1 with halogen derivs. of enol sulfonates, phosphates or carbamates of the ring Q2. In an example, 0.143 mol of (1R)-3-bromocamphor enol triflate was coupled with 4-bromo-2,5-dimethyl-3-thienylmagnesium bromide (prepared from 0.286 mol of 3,4-dibromothiophene in 250 mL of THF) in the presence of 7 mmol of Pd(PPh3)2Cl2 catalyst at 50° overnight to give II (X1 = X2 = Br). In other examples, diphosphine ligands II (X1 = X2 = PPh2; X1 = PPh2, X2 = P(3,5-Me2C6H3)2; X1 = P(3,5-Me2C6H3)2, X2 = PPh2) were prepared by stepwise phosphorylation of II (X1 = X2 = Br); rhodium-catalyzed asym. hydrogenation

of di-Me itaconate gave di-Me (2S)-2-methylsuccinate with 92% ee.  
 IT 55065-02-6 57957-24-1 60676-51-9  
 67654-56-2 136744-85-9  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (process for preparation of chiral cycloalkenyl diphosphines with terpenoid  
 backbone as ligands for transition metal-catalyzed asym. hydrogenation)  
 RN 55065-02-6 CAPLUS  
 CN 2-Propenoic acid, 2-(acetylamino)-3-phenyl-, (2Z)- (CA INDEX NAME)

Double bond geometry as shown.

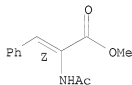


RN 57957-24-1 CAPLUS  
 CN Acetamide, N-(1-phenylethenyl)- (CA INDEX NAME)



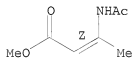
RN 60676-51-9 CAPLUS  
 CN 2-Propenoic acid, 2-(acetylamino)-3-phenyl-, methyl ester, (2Z)- (CA INDEX NAME)

Double bond geometry as shown.



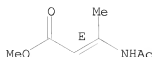
RN 67654-56-2 CAPLUS  
 CN 2-Butenoic acid, 3-(acetylamino)-, methyl ester, (2Z)- (CA INDEX NAME)

Double bond geometry as shown.



RN 136744-85-9 CAPLUS  
 CN 2-Butenoic acid, 3-(acetylamino)-, methyl ester, (2E)- (CA INDEX NAME)

Double bond geometry as shown.



REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 10 OF 26 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2005:696867 CAPLUS  
 DOCUMENT NUMBER: 143:194235  
 TITLE: Method of enantio-selective nucleophilic addition reaction for conversion of enamide to imine and method of synthesizing  $\alpha$ -amino- $\gamma$ -keto acid ester  
 INVENTOR(S): Kobayashi, Shu  
 PATENT ASSIGNEE(S): Japan Science and Technology Agency, Japan  
 SOURCE: PCT Int. Appl., 25 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005070876	A1	20050804	WO 2005-JP1282	20050124
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1707559	A1	20061004	EP 2005-704279	20050124
R: DE, FR, GB				
US 20070161804	A1	20070712	US 2006-587075	20060929
PRIORITY APPLN. INFO.:			JP 2004-16407	A 20040123
			WO 2005-JP1282	W 20050124
OTHER SOURCE(S):			MARPAT 143:194235	
GI				

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB An asym. synthesis of amino acid compound such as  $\alpha$ -amino- $\gamma$ -keto acid ester and  $\alpha$ , $\gamma$ -diamino acid esters and conversion of the latter into  $\gamma$ -lactams are described. The amino acid compound is useful as a starting material or synthetic intermediate for production of

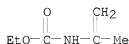


medicinal products, agrochems., perfumes, functional polymers, etc. There is provided a method of enantio-selective nucleophilic addition reaction of enamide of formula  $R5R6C:C(R4)NHCOR3$  [ $R3 =$  (un)substituted hydrocarbyl optionally having a substituent bonded through O;  $R4 =$  (un)substituted hydrocarbyl;  $R5, R6 = H$ , (un)substituted hydrocarbyl; at least one of  $R5$  and  $R6$  is H] to imine compound of formula  $R1O2CCH:NR2$  [ $R1 =$  (un)substituted hydrocarbyl;  $R2 = RCO, RO2C$ ; wherein  $R =$  (un)substituted hydrocarbyl] in the presence of a chiral copper catalyst to give optically active  $\alpha$ -amino- $\gamma$ -imino acid ester (I) or (II) ( $R1-R6 =$  same as above) with formation of chiral amino group. I and II are further converted into  $\alpha$ -amino- $\gamma$ -keto acid ester (III) or (IV) by acid hydrolysis or into  $\alpha, \gamma$ -diamino acid ester (V) or (VI) by reduction. Removing the acyl group of  $\gamma$ -amino group from the  $\alpha, \gamma$ -diamino acid ester V or VI followed by cyclization gives  $\gamma$ -lactams (VII) or (VIII). Thus, 7.2 mg  $Cu(OTf)_2$  was dried at  $100^\circ$  for 2 h followed by adding 10.8 mg (1R,2R)-1,2-diphenyl-1,2-bis(1-naphthylamino)ethane under Ar and then 1.5 mL  $CH_2Cl_2$  and the light blue solution was stirred for  $\geq 2$  h and cooled at  $0^\circ$ . To the solution were added a solution of 0.30 mmol enamide (IX) in 0.8 mL  $CH_2Cl_2$  and then slowly a solution of 0.20 mmol  $EtO_2CCH:NCOC11H23$  in 2.0 mL for 30 min. The resulting reaction was stirred at  $0^\circ$  for 15 min and quenched by adding saturated aqueous  $NaHCO_3$  to give 77%  $\alpha$ -amino- $\gamma$ -imino acid (X) in a syn/anti ratio of 86/14 with 94% ee (syn).

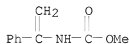
IT 52820-12-9 72328-04-2 697301-71-6  
697301-72-7 697301-73-8 697301-75-0  
697301-76-1

RL: RCT (Reactant); RACT (Reactant or reagent)  
(asym. synthesis of  $\alpha$ -amino- $\gamma$ -keto acid ester,  
 $\alpha, \gamma$ -diamino acid esters, and  $\gamma$ -lactams via  
enantioselective nucleophilic addition reaction of enamides to  
imines in presence of chiral copper complex)

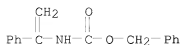
RN 52820-12-9 CAPLUS  
CN Carbamic acid, N-(1-methylethenyl)-, ethyl ester (CA INDEX NAME)



RN 72328-04-2 CAPLUS  
CN Carbamic acid, N-(1-phenylethenyl)-, methyl ester (CA INDEX NAME)

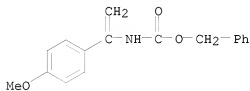


RN 697301-71-6 CAPLUS  
CN Carbamic acid, N-(1-phenylethenyl)-, phenylmethyl ester (CA INDEX NAME)



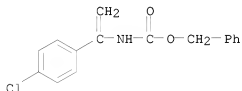
RN 697301-72-7 CAPLUS

CN Carbamic acid, N-[1-(4-methoxyphenyl)ethenyl]-, phenylmethyl ester (CA INDEX NAME)



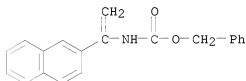
RN 697301-73-8 CAPLUS

CN Carbamic acid, N-[1-(4-chlorophenyl)ethenyl]-, phenylmethyl ester (CA INDEX NAME)



RN 697301-75-0 CAPLUS

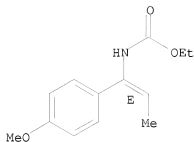
CN Carbamic acid, N-[1-(2-naphthalenyl)ethenyl]-, phenylmethyl ester (CA INDEX NAME)



RN 697301-76-1 CAPLUS

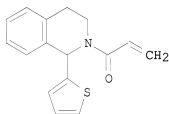
CN Carbamic acid, [(1E)-1-(4-methoxyphenyl)-1-propenyl]-, ethyl ester (9CI) (CA INDEX NAME)

Double bond geometry as shown.



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

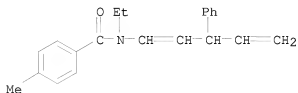
L18 ANSWER 11 OF 26 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2005:436084 CAPLUS  
 DOCUMENT NUMBER: 143:133559  
 TITLE: Copper-Catalyzed Cross-Coupling of  
 Imines, Acid Chlorides, and Organostannanes: A  
 Multicomponent Synthesis of  $\alpha$ -Substituted Amides  
 AUTHOR(S): Black, Daniel A.; Arndt, Bruce A.  
 CORPORATE SOURCE: Department of Chemistry, McGill University, Montreal,  
 QC, H3A 2K6, Can.  
 SOURCE: Journal of Organic Chemistry (2005), 70(13), 5133-5138  
 CODEN: JOCEAH; ISSN: 0022-3263  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 143:133559  
 GI



I

AB A copper-catalyzed cross-coupling of organotin reagents with  
 imines and acid chlorides is reported. The reaction proceeds  
 efficiently with a range of vinyl-, alkyl-, aryl- and  
 heteroaryl-substituted organostannanes as well as a diverse set of  
 imines of non-enolizable aldehydes. Use of chloroformates also  
 allows for the formation of N-protected  $\alpha$ -substituted amines. This  
 chemical has been applied to the synthesis of isoquinoline alkaloid derivs.  
 (e.g. I) through the activation of cyclic imines.  
 IT 858126-59-7P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of  $\alpha$ -substituted amides via copper-catalyzed  
 cross-coupling of imines, acid chlorides and organostannanes)

RN 858126-59-7 CAPLUS  
 CN Benamide, N-ethyl-4-methyl-N-(3-phenyl-1,4-pentadien-1-yl)- (CA INDEX NAME)



REFERENCE COUNT: 68 THERE ARE 68 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 12 OF 26 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2004:559323 CAPLUS

DOCUMENT NUMBER: 141:243143

TITLE: Highly diastereo- and enantioselective reactions of ene carbamates with ethyl glyoxylate to give optically active syn and anti  $\alpha$ -alkyl- $\beta$ -hydroxy imines and ketones

AUTHOR(S): Matsubara, Ryosuke; Nakamura, Yoshitaka; Kobayashi, Shu

CORPORATE SOURCE: Graduate School of Pharmaceutical Sciences, The University of Tokyo, Hongo, Bunkyo-ku, Tokyo, 113-0033, Japan

SOURCE: Angewandte Chemie, International Edition (2004), 43(25), 3258-3260

CODEN: ACIEF5; ISSN: 1433-7851

PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 141:243143

AB The remarkably selective addition of ene carbamates  $R_2CH:CR_1NHCO_2CH_2Ph$  [ $R_1 = Ph, 4-MeC_6H_4, 4-ClC_6H_4, 2-naphthyl, Et; R_2 = H, Me, Et; R_1R_2 = (CH_2)_4$ ] to Et glyoxylate in the presence of a copper-diimine catalyst (0.1 mol%) gives the corresponding imines in high yields with excellent enantioselectivities. A concerted aza-ene-type reaction mechanism was proposed to explain the stereochem. outcome.

IT 697301-71-6 697301-72-7 697301-73-8

697301-74-9 697301-76-1 697301-77-2

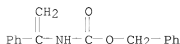
750596-65-7

RL: RCT (Reactant); RACT (Reactant or reagent)

(stereoselective reactions of alkenylcarbamates with glyoxylate to give syn and anti  $\alpha$ -alkyl- $\beta$ -hydroxy imines and ketones)

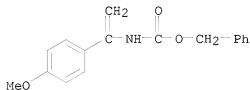
RN 697301-71-6 CAPLUS

CN Carbamic acid, N-(1-phenylethenyl)-, phenylmethyl ester (CA INDEX NAME)



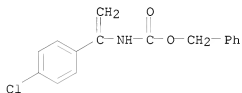
RN 697301-72-7 CAPLUS

CN Carbamic acid, N-[1-(4-methoxyphenyl)ethenyl]-, phenylmethyl ester (CA INDEX NAME)



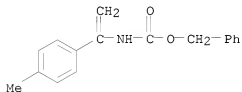
RN 697301-73-8 CAPLUS

CN Carbamic acid, N-[1-(4-chlorophenyl)ethenyl]-, phenylmethyl ester (CA INDEX NAME)



RN 697301-74-9 CAPLUS

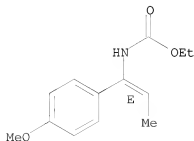
CN Carbamic acid, N-[1-(4-methylphenyl)ethenyl]-, phenylmethyl ester (CA INDEX NAME)



RN 697301-76-1 CAPLUS

CN Carbamic acid, [(1E)-1-(4-methoxyphenyl)-1-propenyl]-, ethyl ester (9CI) (CA INDEX NAME)

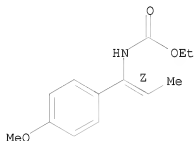
Double bond geometry as shown.



RN 697301-77-2 CAPLUS

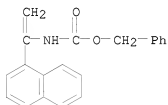
CN Carbamic acid, [(1Z)-1-(4-methoxyphenyl)-1-propenyl]-, ethyl ester (9CI)  
(CA INDEX NAME)

Double bond geometry as shown.



RN 750596-65-7 CAPLUS

CN Carbamic acid, [1-(1-naphthalenyl)ethenyl]-, phenylmethyl ester (9CI) (CA INDEX NAME)



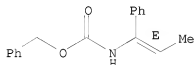
IT 750596-67-9P 750596-68-0P 750596-69-1P  
750596-70-4P 750596-71-5P 750596-72-6P  
750596-73-7P 750596-74-8P 750596-75-9P  
750596-76-0P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(stereoselective reactions of alkenylcarbamates with glyoxylate to give  
syn and anti  $\alpha$ -alkyl- $\beta$ -hydroxy imines and ketones)

RN 750596-67-9 CAPLUS

CN Carbamic acid, N-[(1E)-1-phenyl-1-propen-1-yl]-, phenylmethyl ester (CA INDEX NAME)

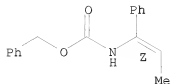
Double bond geometry as shown.



RN 750596-68-0 CAPLUS

CN Carbamic acid, N-[(1Z)-1-phenyl-1-propen-1-yl]-, phenylmethyl ester (CA INDEX NAME)

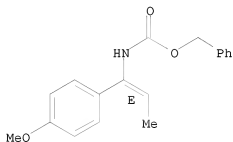
Double bond geometry as shown.



RN 750596-69-1 CAPLUS

CN Carbamic acid, N-[(1E)-1-(4-methoxyphenyl)-1-propen-1-yl]-, phenylmethyl ester (CA INDEX NAME)

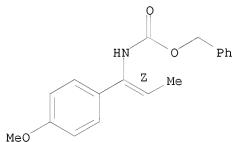
Double bond geometry as shown.



RN 750596-70-4 CAPLUS

CN Carbamic acid, [(1Z)-1-(4-methoxyphenyl)-1-propenyl]-, phenylmethyl ester (9CI) (CA INDEX NAME)

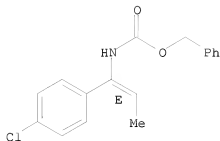
Double bond geometry as shown.



RN 750596-71-5 CAPLUS

CN Carbamic acid, N-[(1E)-1-(4-chlorophenyl)-1-propen-1-yl]-, phenylmethyl ester (CA INDEX NAME)

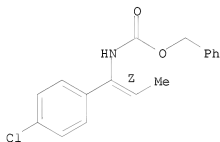
Double bond geometry as shown.



RN 750596-72-6 CAPLUS

CN Carbamic acid, [(1Z)-1-(4-chlorophenyl)-1-propenyl]-, phenylmethyl ester (9CI) (CA INDEX NAME)

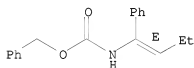
Double bond geometry as shown.



RN 750596-73-7 CAPLUS

CN Carbamic acid, [(1E)-1-phenyl-1-butenyl]-, phenylmethyl ester (9CI) (CA INDEX NAME)

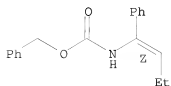
Double bond geometry as shown.



RN 750596-74-8 CAPLUS

CN Carbamic acid, [(1Z)-1-phenyl-1-butenyl]-, phenylmethyl ester (9CI) (CA INDEX NAME)

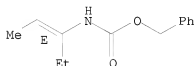
Double bond geometry as shown.





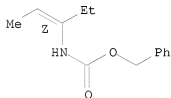
RN 750596-75-9 CAPLUS  
 CN Carbamic acid, N-[(1E)-1-ethyl-1-propen-1-yl]-, phenylmethyl ester (CA  
 INDEX NAME)

Double bond geometry as shown.

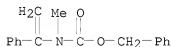


RN 750596-76-0 CAPLUS  
 CN Carbamic acid, [(1Z)-1-ethyl-1-propenyl]-, phenylmethyl ester (9CI) (CA  
 INDEX NAME)

Double bond geometry as shown.



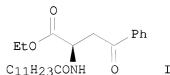
IT 750596-90-8P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (stereoselective reactions of alkenylcarbamates with glyoxylate to give  
 syn and anti  $\alpha$ -alkyl- $\beta$ -hydroxy imines and ketones)  
 RN 750596-90-8 CAPLUS  
 CN Carbamic acid, methyl(1-phenylethenyl)-, phenylmethyl ester (9CI) (CA  
 INDEX NAME)



REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 13 OF 26 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2004:290653 CAPLUS  
 DOCUMENT NUMBER: 141:22992  
 TITLE: Copper(II)-catalyzed highly enantioselective  
 addition of enamides to imines: The use of  
 enamides as nucleophiles in asymmetric catalysis  
 AUTHOR(S): Matsubara, Ryosuke; Nakamura, Yoshitaka; Kobayashi,  
 Shue  
 CORPORATE SOURCE: Graduate School of Pharmaceutical Sciences, The  
 University of Tokyo, Hongo, Bunkyo-ku, Tokyo,  
 113-0033, Japan

SOURCE: Angewandte Chemie, International Edition (2004),  
43(13), 1679-1681  
CODEN: ACIEF5; ISSN: 1433-7851  
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 141:22992  
GI

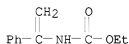


AB High-yielding efficient routes to optically active amino acid and 1,3-diamine derivs. have been achieved by the catalytic enantioselective addition of enamides to imines using a chiral copper catalyst. E.g., reaction of EtO2CCH:NCOC11H23 with MeCONHCPh:CH2 gave a  $\beta$ -amino imine, which was converted to a  $\beta$ -amino ketone I by treatment with acid. The catalysts used were Cu(OTf)<sub>2</sub> in presence of chiral diamines. This reaction demonstrates the utility of enamides as nucleophiles. The reaction mechanism and the structure of the chiral catalyst are also discussed.

IT 15728-00-4 52820-12-9 57957-24-1  
697301-70-5 697301-71-6 697301-72-7  
697301-73-8 697301-74-9 697301-75-0  
697301-76-1 697301-77-2  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(asym. preparation of amino acids and 1,3-diamine derivs. by copper (II)-catalyzed enantioselective addition of enamides to imines)

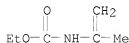
RN 15728-00-4 CAPLUS

CN Carbamic acid, (1-phenylethenyl)-, ethyl ester (9CI) (CA INDEX NAME)



RN 52820-12-9 CAPLUS

CN Carbamic acid, N-(1-methylethenyl)-, ethyl ester (CA INDEX NAME)

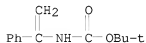


RN 57957-24-1 CAPLUS

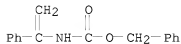
CN Acetamide, N-(1-phenylethenyl)- (CA INDEX NAME)



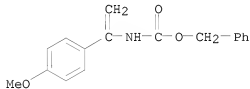
RN 697301-70-5 CAPLUS  
 CN Carbamic acid, N-(1-phenylethenyl)-, 1,1-dimethylethyl ester (CA INDEX NAME)



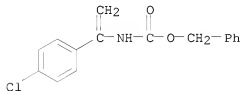
RN 697301-71-6 CAPLUS  
 CN Carbamic acid, N-(1-phenylethenyl)-, phenylmethyl ester (CA INDEX NAME)



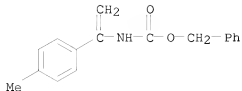
RN 697301-72-7 CAPLUS  
 CN Carbamic acid, N-[1-(4-methoxyphenyl)ethenyl]-, phenylmethyl ester (CA INDEX NAME)



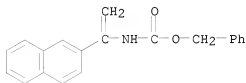
RN 697301-73-8 CAPLUS  
 CN Carbamic acid, N-[1-(4-chlorophenyl)ethenyl]-, phenylmethyl ester (CA INDEX NAME)



RN 697301-74-9 CAPLUS  
 CN Carbamic acid, N-[1-(4-methylphenyl)ethenyl]-, phenylmethyl ester (CA INDEX NAME)

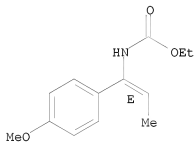


RN 697301-75-0 CAPLUS  
 CN Carbamic acid, N-[1-(2-naphthalenyl)ethenyl]-, phenylmethyl ester (CA INDEX NAME)



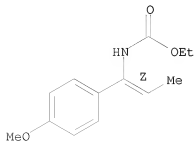
RN 697301-76-1 CAPLUS  
 CN Carbamic acid, [(1E)-1-(4-methoxyphenyl)-1-propenyl]-, ethyl ester (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 697301-77-2 CAPLUS  
 CN Carbamic acid, [(1Z)-1-(4-methoxyphenyl)-1-propenyl]-, ethyl ester (9CI) (CA INDEX NAME)

Double bond geometry as shown.



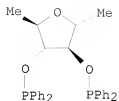
IT 72012-52-3P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (asym. preparation of amino acids and 1,3-diamine derivs. by copper  
 (II)-catalyzed enantioselective addition of enamides to imines)  
 RN 72012-52-3 CAPLUS  
 CN Acetamide, N-methyl-N-(1-phenylethenyl)- (CA INDEX NAME)



REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 14 OF 26 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2004:177965 CAPLUS  
 DOCUMENT NUMBER: 140:235900  
 TITLE: Preparation of chiral diphosphines and their  
 transition metal complexes and their use in asymmetric  
 synthesis  
 INVENTOR(S): Meseguer, Benjamin; Militzer, Hans-Christian;  
 Castillon, Sergio; Claver, Carmen; Diaz, Yolanda;  
 Aghmiz, Mohamed; Guiu, Esther; Aghmiz, Ali; Masdeu,  
 Anna  
 PATENT ASSIGNEE(S): Bayer A.-G., Germany  
 SOURCE: Ger. Offen., 34 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10241256	A1	20040304	DE 2002-10241256	20020906
EP 1400527	A1	20040324	EP 2003-18221	20030811
EP 1400527	B1	20060322		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
AT 321059	T	20060415	AT 2003-18221	20030811
ES 2259400	T3	20061001	ES 2003-18221	20030811
IN 2003DN00996	A	20050527	IN 2003-DN996	20030814
US 20050080047	A1	20050414	US 2003-643552	20030819
US 7193092	B2	20070320		
JP 2004161741	A	20040610	JP 2003-208112	20030820
CN 1493576	A	20040505	CN 2003-158087	20030821
US 20070155971	A1	20070705	US 2007-707710	20070216
PRIORITY APPLN. INFO.:			DE 2002-10238115	IA 20020821
			DE 2002-10241256	A 20020906
			US 2003-643552	A3 20030819
OTHER SOURCE(S):	CASREACT 140:235900; MARPAT 140:235900			
GI				



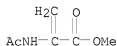
I

AB The present invention concerns the preparation of chiral diphosphines their transition metal complexes, and use of complexes in asym. syntheses. Thus, preparation of 2,3-bis-O-(diphenylphosphino)-1,6-dideoxy-2,5-anhydro-D-mannitol I, prepared from 1,6-dideoxy-2,5-anhydro-D-mannitol, and [Rh(cod)2]BF4/I catalyzed enantioselective hydrogenation of CH2:C(NHAc) (CO2Me) is described.

IT 35356-70-8 52386-78-4 57957-24-1  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation of chiral diphosphines and its transition metal complexes and their use in asym. synthesis)

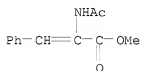
RN 35356-70-8 CAPLUS

CN 2-Propenoic acid, 2-(acetylamino)-, methyl ester (CA INDEX NAME)



RN 52386-78-4 CAPLUS

CN 2-Propenoic acid, 2-(acetylamino)-3-phenyl-, methyl ester (CA INDEX NAME)



RN 57957-24-1 CAPLUS

CN Acetamide, N-(1-phenylethenyl)- (CA INDEX NAME)



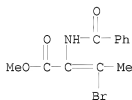
L18 ANSWER 15 OF 26 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2002:835619 CAPLUS

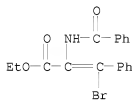
DOCUMENT NUMBER: 138:401626

TITLE: Product class 12: oxazoles

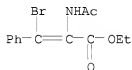
AUTHOR(S): Boyd, G. V.  
 CORPORATE SOURCE: Givataim, 53460, Israel  
 SOURCE: Science of Synthesis (2002), 11, 383-479  
 CODEN: SSCYJ9  
 PUBLISHER: Georg Thieme Verlag  
 DOCUMENT TYPE: Journal; General Review  
 LANGUAGE: English  
 AB A review of the synthesis of simple and condensed oxazoles. Reaction covered include addition, cycloaddn., heterocyclization, hydrolysis.  
 IT 99990-33-7 101735-38-0 106274-54-8  
 526212-81-7  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation of oxazoles via cyclization of N-acyl-β-halo enamines)  
 RN 99990-33-7 CAPLUS  
 CN 2-Butenoic acid, 2-(benzoylamino)-3-bromo-, methyl ester (CA INDEX NAME)



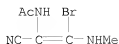
RN 101735-38-0 CAPLUS  
 CN 2-Propenoic acid, 2-(benzoylamino)-3-bromo-3-phenyl-, ethyl ester (CA INDEX NAME)



RN 106274-54-8 CAPLUS  
 CN 2-Propenoic acid, 2-(acetyl amino)-3-bromo-3-phenyl-, ethyl ester (CA INDEX NAME)



RN 526212-81-7 CAPLUS  
 CN Acetamide, N-[2-bromo-1-cyano-2-(methylamino)ethenyl]- (CA INDEX NAME)



REFERENCE COUNT: 238 THERE ARE 238 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 16 OF 26 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2002:832759 CAPLUS

DOCUMENT NUMBER: 137:353062

TITLE: Preparation of 2-aminopyrrolidine

INVENTOR(S): derivatives as thrombin receptor antagonists  
Suzuki, Shuichi; Kotake, Makoto; Miyamoto, Mitsuaki;  
Kawahara, Tetsuya; Kajiwara, Akiharu; Hishinuma,  
Ieharu; Okano, Kazuo; Miyazawa, Syuhei; Clark,  
Richard; Ozaki, Fumihiro; Sato, Nobuaki; Shinoda,  
Masanobu; Kamada, Atsushi; Tsukada, Itaru; Matsuura,  
Fumiyoshi; Naoe, Yoshimitsu; Terauchi, Taro; Ohashi,  
Yoshiaki; Ito, Osamu; Tanaka, Hiroshi; Musya, Takashi;  
Kogushi, Motoji; Kawada, Tautomu; Matsuoka, Toshiyuki;  
Kobayashi, Hiroko; Chiba, Kenichi; Kimura, Akifumi;  
Ono, Naoto

PATENT ASSIGNEE(S): Eisai Co., Ltd., Japan

SOURCE: PCT Int. Appl., 948 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 4

PATENT INFORMATION:

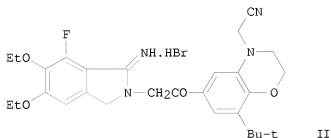
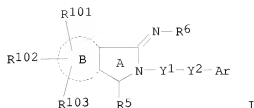
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002085855	A1	20021031	WO 2002-JP3961	20020419
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2446924	A1	20021031	CA 2002-2446924	20020419
AU 2002255269	A1	20021105	AU 2002-255269	20020419
AU 2002255269	B2	20070315		
EP 1391451	A1	20040225	EP 2002-724628	20020419
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
BR 2002008985	A	20040309	BR 2002-8985	20020419
CN 1503784	A	20040609	CN 2002-808565	20020419
CN 1243735	C	20060301		
HU 2004000467	A2	20050228	HU 2004-467	20020419
EP 1614680	A2	20060111	EP 2005-22069	20020419
EP 1614680	A3	20060201		



R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
IE, FI, CY, TR

CN 1733725	A	20060215	CN 2005-10080404	20020419
CN 100402499	C	20080716		
RU 2270192	C2	20060220	RU 2003-133664	20020419
CN 1754880	A	20060405	CN 2005-10080403	20020419
CN 1321996	C	20070620		
JP 3795458	B2	20060712	JP 2002-583382	20020419
NZ 528820	A	20070126	NZ 2002-528820	20020419
AT 425964	T	20090415	AT 2002-720534	20020419
MX 2003009497	A	20040524	MX 2003-9497	20031016
ZA 2003008064	A	20050207	ZA 2003-8064	20031016
KR 749794	B1	20070817	KR 2003-713674	20031018
IN 2003DN01719	A	20051014	IN 2003-DN1719	20031020
US 20050004204	A1	20050106	US 2004-475188	20040609
US 7244730	B2	20070717		
AU 2005202135	A1	20050609	AU 2005-202135	20050517
AU 2005202135	B2	20071115		
KR 749795	B1	20070817	KR 2005-709505	20050526
US 20050245592	A1	20051103	US 2005-158941	20050622
JP 2006206595	A	20060810	JP 2006-41270	20060217
JP 2006225393	A	20060831	JP 2006-41255	20060217
HK 1086269	A1	20081107	HK 2006-106324	20060601
IN 2006KN03260	A	20080801	IN 2006-KN3260	20061107
PRIORITY APPLN. INFO.:			JP 2001-121829	A 20010419
			JP 2001-269422	A 20010905
			AU 2002-255269	A3 20020419
			CN 2002-808565	A3 20020419
			EP 2002-724628	A3 20020419
			JP 2002-583382	A3 20020419
			WO 2002-JP3961	W 20020419
			KR 2003-713674	A3 20031018
			IN 2003-DN1719	A3 20031020
			US 2004-475188	A1 20040609

OTHER SOURCE(S): MARPAT 137:353062  
GI

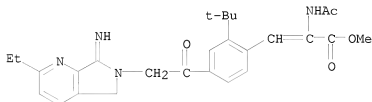


- AB 2-Iminopyrrolidine derivs. including 2,3-dihydro-1H-isoindole and 6,7-dihydro-5H-pyrrolo[3,4-b]pyridine represented by the general formula (I) or salts thereof [wherein B = (un)substituted aromatic hydrocarbon or aromatic heterocyclic ring optionally containing 1 or 2 N atom(s); R101, R102, R103 = H, cyano, halo, each (un)substituted C1-6 alkyl, C2-8 alkenyl, C2-8 alkynyl, acyl, CO2H, CONH2, C1-6 alkoxy, C1-6 alkylaminocarbonyl, HO, C1-6 alkoxy, C3-8 cycloalkyloxy, NH2, C1-6 alkylamino, C3-8 cycloalkylamino, acylamino, ureido, sulfonylamino, sulfonyl, SO2NH2, or C3-8 cycloalkyl, etc.; Y1 = a single bond, (CH2)<sub>m</sub>, each (un)substituted CH, CH2, NH, CONH, or SO2NH, CH2CO, SO, SO2, CO (wherein m = an integer of 1-3); Y2 = a single bond, O, N, (CH2)<sub>m</sub>, each (un)substituted CH, CH2, or C:(NOH), CO, SO, SO2; Ar = H, (un)substituted Ph] are prepared. These compds. are thrombin receptor antagonists, in particular thrombin PAR1 receptor antagonists and are useful as blood platelet aggregation inhibitors and proliferation inhibitors of smooth muscle cell, endothelial cell, fibroblast, kidney cell, osteosarcoma cell, muscle cell, cancer cell, and/or glial cell and for the treatment and/or prevention of thrombosis, vascular restenosis, deep vein thrombosis, lung embolism, cerebral infarction, heart disease, disseminated intravascular coagulation syndrome, hypertension, inflammation, rheumatism, asthma, glomerulonephritis, osteoporosis, nerve disease, and/or malignant tumor. Thus, [6-[(1-imino-1,3-dihydroisoindol-2-yl)acetyl]-2,3-dihydrobenz[1,4]oxazin-4-yl]acetonitrile derivative (II) in vitro showed IC50 of 0.017 μM for inhibiting the binding of [3H]Ala-(4-fluoro)Phe-Arg-(cyclohexyl)Ala-homoArg-Tyr-NH2 to thrombin receptor of human blood platelet, that of 0.29 μM for inhibiting the human blood platelet aggregation induced by thrombin, and that of 0.0061 μM for inhibiting the proliferation of rat smooth cell.
- IT 474546-41-3P 474546-55-9P 474546-70-8P  
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (preparation of dihydroisoindole and dihydro-5H-pyrrolo[3,4-b]pyridine

derivs. as thrombin receptor antagonists and remedies and/or preventives for diseases)

RN 474546-41-3 CAPLUS

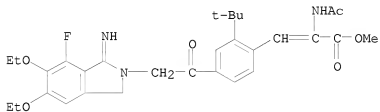
CN 2-Propenoic acid, 2-(acetylamino)-3-[2-(1,1-dimethylethyl)-4-[2-(2-ethyl-5,7-dihydro-7-imino-6H-pyrrolo[3,4-b]pyridin-6-yl)acetyl]phenyl]-, methyl ester, hydrobromide (1:1) (CA INDEX NAME)



● HBr

RN 474546-55-9 CAPLUS

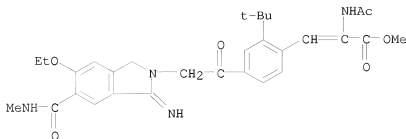
CN 2-Propenoic acid, 2-(acetylamino)-3-[4-[2-(5,6-diethoxy-7-fluoro-1,3-dihydro-1-imino-2H-isoindol-2-yl)acetyl]-2-(1,1-dimethylethyl)phenyl]-, methyl ester, hydrobromide (1:1) (CA INDEX NAME)



● HBr

RN 474546-70-8 CAPLUS

CN 2-Propenoic acid, 2-(acetylamino)-3-[2-(1,1-dimethylethyl)-4-[2-[5-ethoxy-1,3-dihydro-1-imino-6-[(methylamino)carbonyl]-2H-isoindol-2-yl]acetyl]phenyl]-, methyl ester, hydrobromide (1:1) (CA INDEX NAME)



● HBr

REFERENCE COUNT: 100 THERE ARE 100 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 17 OF 26 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2002:832746 CAPLUS

DOCUMENT NUMBER: 137:352492

TITLE: Copper-catalyzed formation of carbon-heteroatom and carbon-carbon bonds by arylation and vinylation of amines, amides, hydrazides, heterocycles, alcohols, enolates, and malonates, using aryl, heteroaryl, and vinyl halides and analogs  
 INVENTOR(S): Buchwald, Stephen L.; Klapars, Artis; Antilla, Jon C.; Job, Gabriel E.; Wolter, Martina; Kwong, Fuk Y.; Nordmann, Gero; Hennessy, Edward J.

PATENT ASSIGNEE(S): Massachusetts Institute of Technology, USA

SOURCE: PCI Int. Appl., 306 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002085838	A1	20021031	WO 2002-US12785	20020424
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TL, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
CA 2445159	A1	20021031	CA 2002-2445159	20020424
AU 2002258946	A1	20021105	AU 2002-258946	20020424
US 20030065187	A1	20030403	US 2002-128981	20020424
US 6759554	B2	20040706		
EP 1390340	A1	20040225	EP 2002-728925	20020424

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

CN 1518534	A	20040804	CN 2002-812587	20020424
CN 1266112	C	20060726		
JP 2004536798	T	20041209	JP 2002-583366	20020424
CN 1854128	A	20061101	CN 2006-10082481	20020424
US 20040019216	A1	20040129	US 2003-435719	20030508
US 6867298	B2	20050315		
US 20050215794	A1	20050929	US 2005-28500	20050104
US 7115784	B2	20061003		
US 20060264673	A1	20061123	US 2006-431154	20060509

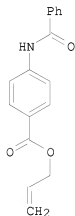
## PRIORITY APPLN. INFO.:

US 2001-286268P	P	20010424
US 2001-348014P	P	20011024
US 2001-344208P	P	20011221
CN 2002-812587	A3	20020424
US 2002-128981	A3	20020424
WO 2002-US12785	W	20020424
US 2003-435719	A3	20030508
US 2005-28500	A3	20050104

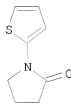
## OTHER SOURCE(S):

CASREACT 137:352492; MARPAT 137:352492

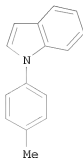
GI



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II



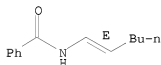
III

AB The invention relates to copper-catalyzed carbon-heteroatom and carbon-carbon bond-forming methods. More specifically, it relates to the arylation, heteroarylation, and vinylation of compds. with nucleophilic N, O, and C atoms, by aryl and vinyl halides and sulfonates, using various Cu-based catalysts and suitable ligands. The methods provide an inexpensive alternative to corresponding palladium-catalyzed reactions. Thus, the invention includes copper-catalyzed methods of forming a carbon-nitrogen bond between the nitrogen atom of an amide or amine moiety and the activated carbon of an aryl, heteroaryl, or vinyl halide or sulfonate. The invention provides similar copper-catalyzed reactions of acyl hydrazines (i.e., hydrazides). The invention further relates to copper-catalyzed arylation and vinylation of nitrogen-containing heteroaroms., e.g., indole, pyrazole, and indazole, at nitrogen. Similarly, the invention provides copper-catalyzed

arylation and vinylation of alcs. at the oxygen atom. Finally, the invention provides copper-catalyzed methods of forming a carbon-carbon bond between reactants with nucleophilic carbon atoms, e.g., an enolate or malonate anion, and the activated carbon of the aryl, heteroaryl, or vinyl halides or sulfonates. Importantly, all of the invention methods are relatively inexpensive to practice due to the low cost of the copper catalysts. For example, a claimed method for amines, amides, and hydrazides involves reaction of halides and sulfonates Z-X [Z = (un)substituted aryl, heteroaryl, or alkenyl; X = iodo, Br, Cl, alkylsulfonate, arylsulfonate] with amines and derivs. R-NH-R' [R = alkyl, cycloalkyl aralkyl, aryl, heteroaryl, formyl, acyl, alkoxy carbonyl, aryloxy carbonyl, acylamino, etc.; R' = H, alkyl, cycloalkyl, (hetero)aralkyl, (hetero)aryl, formyl, acyl, amino, or amidino; with proviso] in the presence of a copper atom or ion and a ligand in the presence of a Bronsted base, yielding a corresponding arylated or vinylated product Z-NRR'. Thus, arylation of benzamide with allyl 4-iodobenzoate in dioxane solvent in the presence of CuI (catalyst), trans-1,2-cyclohexanediamine (ligand), and K3PO4 (base), at 110° in a resealable Schlenk tube, gave the expected product I in 91% yield. Similarly, 2-pyrrolidinone was N-heteroarylated by 2-iodothiophene under the same conditions to give II in quant. yield. Indole was N-arylated by 4-bromotoluene to give III in 95% yield. A similar reaction of (E)-2-undecen-1-ol with (E)-1-iodo-1-decene using CuI, 3,4,7,8-tetramethyl-1,10-phenanthroline, and Cs2CO3 in PhMe at 80°, gave 68% (E,E)-1-(dec-1-enyloxy)undec-2-ene.

IT 474352-83-5P, trans-N-(1-Hexenyl)benzamide  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (alkenylation product; inexpensive copper-catalyzed arylation and vinylation of amines, amides, heterocycles, alcs., and enolates, using aryl, heteroaryl, and vinyl halides and analogs)  
 RN 474352-83-5 CAPLUS  
 CN Benzamide, N-(1E)-1-hexen-1-yl- (CA INDEX NAME)

Double bond geometry as shown.



REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 18 OF 26 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2002:152980 CAPLUS

DOCUMENT NUMBER: 136:202281

TITLE: Absorption refrigerator with hydrophilic coatings on heat exchanger tubes.

INVENTOR(S): Ozaki, Toshinori; Kodaira, Muneo; Nakai, Takeshi;

Horiguchi, Masaru; Miyaji, Takashi; Kiyofuji, Masahiro

PATENT ASSIGNEE(S): Hitachi Cable, Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	JP 2002061987	A	20020228	JP 2000-250447	20000822
PRIORITY APPLN. INFO.:				JP 2000-250447	20000822
AB	The title apparatus is characterized by including heat exchanger tubes (e.g., Cu tubes) having surfaces coated with colloidal silica, water glass, silica hydrate, glassy silica or tridymite mixture to form hydrophilic coating films, resp., and refrigerant accommodating sections having liquid-phase or gas-phase refrigerants contacting with the heat exchanger tubes; the refrigerants contain saturated dissolved silica component or hydrophilic agent. The refrigerant accommodating sections include regenerator and absorber accommodated with LiBr-containing refrigerant containing silica component concentration 10,000-28,000 ppm, evaporator and condenser accommodated with pure water refrigerant containing silica component concentration 500-840 ppm, and circulating pipelines.				
IT	28408-65-3, Acetamide, N-ethenyl-, homopolymer RL: TEM (Technical or engineered material use); USES (Uses) (hydrophilic coatings containing; absorption refrigerator with hydrophilic coatings on heat exchanger tubes)				
RN	28408-65-3 CAPLUS				
CN	Acetamide, N-ethenyl-, homopolymer (CA INDEX NAME)				
CM	1				
CRN	5202-78-8				
CMF	C4 H7 N O				

AcNH-CH=CH<sub>2</sub>

L18 ANSWER 19 OF 26 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2001:321284 CAPLUS

DOCUMENT NUMBER: 135:122004

TITLE: Cross-coupling of non-stabilized aziridinylmagnesiums with alkyl halides catalyzed by Cu(I) iodide: a new synthesis of amines bearing a quaternary chiral center and an asymmetric synthesis of both enantiomers of the amines from one chiral starting material

AUTHOR(S): Satoh, T.; Matsue, R.; Fujii, T.; Morikawa, S.  
CORPORATE SOURCE: Faculty of Science, Department of Chemistry, Science University of Tokyo, Kagurazaka, Shinjuku-ku, Tokyo, 162-8601, Japan

SOURCE: Tetrahedron (2001), 57(18), 3891-3898  
CODEN: TETRAB; ISSN: 0040-4020

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 135:122004

AB Treatment of sulfinylaziridines, which were synthesized from 1-chloroalkyl p-tolyl sulfoxides and imines, with ethylmagnesium bromide gave

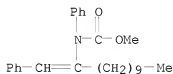
non-stabilized aziridinylmagnesiums by a sulfoxide-magnesium exchange reaction. The cross-coupling of the aziridinylmagnesiums with various kinds of alkyl halides was realized in high yields by using Cu(I) iodide as a catalyst, and the reaction was found to be stereospecific. The coupling products were hydrogenated with Pd(OH)<sub>2</sub> in alc. to give the amines bearing a quaternary chiral center in quant. yields. Synthesis of both enantiomers of the amines bearing a quaternary chiral center was realized starting from optically active (R)-chloromethyl p-tolyl sulfoxide in good overall yields with perfect asym. induction. For example, treatment of (-)-(2R,3R)-2-decyl-2-[(R)-(4-methylphenyl)sulfinyl]-1,3-diphenylaziridine with ethylmagnesium bromide in dry THF gave the corresponding (aziridinyl)magnesium in situ. Addition of iodomethane and copper iodide (CuI) to the solution containing the (aziridinyl)magnesium gave (-)-(2S,3R)-2-decyl-2-methyl-1,3-diphenylaziridine. Hydrogenolysis of the latter gave (+)-(αS)-α-decyl-α-methyl-N-phenylbenzeneethanamine.

IT 351388-17-5P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of chiral amines by cross-coupling of (aziridinyl)magnesium with alkyl halides catalyzed by copper iodide)

RN 351388-17-5 CAPLUS

CN Carbamic acid, phenyl[1-(phenylmethylene)undecyl]-, methyl ester (9CI)  
(CA INDEX NAME)



REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 20 OF 26 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2001:152619 CAPLUS

DOCUMENT NUMBER: 134:207966

TITLE: Chiral ligands, transition-metal complexes thereof and uses thereof in asymmetric reactions

INVENTOR(S): Zhang, Xumu; Xiao, Dengming

PATENT ASSIGNEE(S): The Penn State Research Foundation, USA

SOURCE: PCI Int. Appl., 69 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001014299	A1	20010301	WO 2000-US22976	20000822
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW				



RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

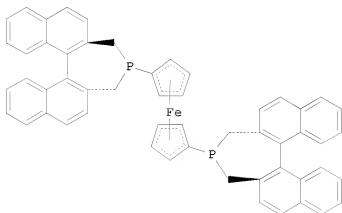
CA 2382779	A1	20010301	CA 2000-2382779	20000822
EP 1206427	A1	20020522	EP 2000-961346	20000822
EP 1206427	B1	20051109		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
JP 2003507443	T	20030225	JP 2001-518392	20000822
US 6525210	B1	20030225	US 2000-643434	20000822
AT 309186	T	20051115	AT 2000-961346	20000822
ES 2254218	T3	20060616	ES 2000-961346	20000822
US 20030163003	A1	20030828	US 2002-319093	20021213
US 6828271	B2	20041207		

PRIORITY APPLN. INFO.:

US 1999-150375P	P	19990823
US 1999-165649P	P	19991115
US 2000-643434	A3	20000822
WO 2000-US22976	W	20000822

OTHER SOURCE(S): CASREACT 134:207966; MARPAT 134:207966

GI



I

AB Chiral ligands and transition metal complexes based on such chiral ligands useful in asym. catalysis are disclosed. The chiral ligands include phospholanes, P,N ligands, N,N ligands, biphenols, and chelating phosphines, e.g. I. The ferrocene-based iridium (R,R)-f-binaphane complex reduces imines to the corresponding amines with 95-99.6 % enantioselectivity and reduces  $\beta$ -substituted- $\alpha$ -arylenamides with 95 % enantioselectivity. The transition metal complexes of the chiral ligands are useful in asym. reactions such as asym. hydrogenation of imines, asym. hydride transfer reactions, hydrosilylation, hydroboration, hydrovinylation, hydroformylation, allylic alkylation, cyclopropanation, Diels-Alder reaction, Heck reaction, isomerization, Aldol reaction, Michael addition and epoxidn. reactions.

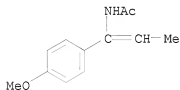
IT 2700-50-7 2890-85-9 57957-24-1

60544-12-9 177750-09-3 177750-16-2  
 177750-24-2 218903-49-2 218903-53-8  
 222415-38-5 222984-41-0 251545-86-5  
 251545-89-8

RL: RCT (Reactant); RACT (Reactant or reagent)  
 (binaphane rhodium complex catalyzed enantioselective hydrogenation of)

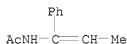
RN 2700-50-7 CAPLUS

CN Acetamide, N-[1-(4-methoxyphenyl)-1-propen-1-yl]- (CA INDEX NAME)



RN 2890-85-9 CAPLUS

CN Acetamide, N-(1-phenyl-1-propen-1-yl)- (CA INDEX NAME)



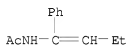
RN 57957-24-1 CAPLUS

CN Acetamide, N-(1-phenylethenyl)- (CA INDEX NAME)



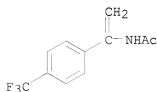
RN 60544-12-9 CAPLUS

CN Acetamide, N-(1-phenyl-1-buten-1-yl)- (CA INDEX NAME)



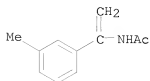
RN 177750-09-3 CAPLUS

CN Acetamide, N-[1-[4-(trifluoromethyl)phenyl]ethenyl]- (CA INDEX NAME)



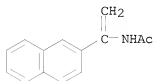
RN 177750-16-2 CAPLUS

CN Acetamide, N-[1-(3-methylphenyl)ethenyl]- (CA INDEX NAME)



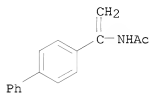
RN 177750-24-2 CAPLUS

CN Acetamide, N-[1-(2-naphthalenyl)ethenyl]- (CA INDEX NAME)



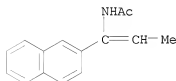
RN 218903-49-2 CAPLUS

CN Acetamide, N-[1-[1,1'-biphenyl]-4-ylethenyl]- (CA INDEX NAME)



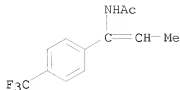
RN 218903-53-8 CAPLUS

CN Acetamide, N-[1-(2-naphthalenyl)-1-propen-1-yl]- (CA INDEX NAME)

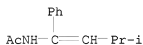


RN 222415-38-5 CAPLUS

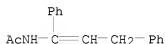
CN Acetamide, N-[1-[4-(trifluoromethyl)phenyl]-1-propen-1-yl]- (CA INDEX NAME)



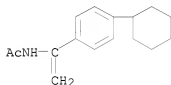
RN 222984-41-0 CAPLUS  
CN Acetamide, N-(3-methyl-1-phenyl-1-buten-1-yl)- (CA INDEX NAME)



RN 251545-86-5 CAPLUS  
CN Acetamide, N-(1,3-diphenyl-1-propen-1-yl)- (CA INDEX NAME)



RN 251545-89-8 CAPLUS  
CN Acetamide, N-[1-(4-cyclohexylphenyl)ethenyl]- (CA INDEX NAME)



REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 21 OF 26 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2000:805739 CAPLUS

DOCUMENT NUMBER: 134:56752

TITLE: Stabilized bismuthonium ylides bearing a highly cross-conjugated ylidic carbon atom: synthesis, structures, and reactions

AUTHOR(S): Matano, Yoshihiro; Nomura, Hazumi; Suzuki, Hitomi  
CORPORATE SOURCE: Department of Chemistry, Graduate School of Science, Kyoto University, Kyoto, 606-8502, Japan

SOURCE: Journal of Organometallic Chemistry (2000), 611(1-2), 89-99

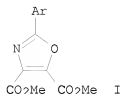
CODEN: JORCAI; ISSN: 0022-328X

PUBLISHER: Elsevier Science S.A.

DOCUMENT TYPE: Journal

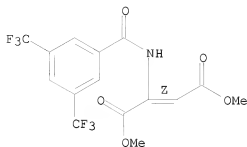
LANGUAGE: English

OTHER SOURCE(S): CASREACT 134:56752  
GI



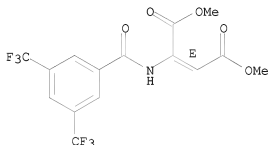
- AB The reaction of iminotriaryl- $\lambda^5$ -bismuthanes  $\text{Ar}_3\text{Bi}:\text{NR}$  (2;  $\text{Ar} = \text{o-MeOC}_6\text{H}_4$ ,  $\text{o-MeOC}_6\text{H}_4$   $\text{R} = \text{COCF}_3$ ,  $\text{COC}_6\text{H}_3(\text{CF}_3)_2$ -3,5,  $\text{COC}_6\text{H}_4\text{NO}_2$ -4;  $\text{Ar} = \text{o-MeOC}_6\text{H}_4$ ,  $\text{R} = \text{COC}_6\text{H}_4\text{CN}$ -4;  $\text{Ar} = \text{p-MeC}_6\text{H}_4$ ,  $\text{R} = \text{SO}_2\text{CF}_3$ ,  $\text{SO}_2\text{Ph}$ ;  $\text{Ar} = \text{Ph}$ ,  $\text{R} = \text{SO}_2\text{C}_6\text{H}_4\text{Me-p}$ ) with dialkyl acetylenedicarboxylates  $\text{R}'\text{O}_2\text{CC.tpi bond.CCO}_2\text{R}'$  (3;  $\text{R}' = \text{Me}$ ,  $\text{Et}$ ) was found to afford highly stabilized bismuthonium ylides  $\text{Ar}_3\text{Bi}:\text{C}(\text{CO}_2\text{R}')\text{C}(\text{CO}_2\text{R}'):\text{NR}$  (4;  $\text{Ar}$ ,  $\text{R}$ ,  $\text{R}' = \text{same as above}$ ) in 50-92% yield. The x-ray crystallog. analyses of two of these ylides ( $\text{o-MeC}_6\text{H}_4$ ) $3\text{Bi}:\text{C}(\text{CO}_2\text{Me})\text{C}(\text{CO}_2\text{Me}):\text{NR}$  ( $\text{R} = \text{COCF}_3$ ,  $\text{COC}_6\text{H}_4\text{NO}_2$ -4) demonstrated that their Bi center possesses a distorted tetrahedral geometry with the highly cross-conjugated ylidic C atom. The observed Bi-Cylide bond lengths of 2.178(7)-2.199(7) Å are close to ordinary Bi-Car bond lengths, suggesting an appreciable single bond character of the Bi-Cylide bond. The action of two equivalent of  $\text{HOAc}$ ,  $\text{HCl}$ , or 4-nitrophenol on several 4 cleaved the Bi-Cylide bond to give the corresponding triarylbismuth(V) compds.  $\text{Ar}_3\text{BiX}_2$  ( $\text{Ar} = \text{o-MeOC}_6\text{H}_4$ ,  $\text{X} = \text{OAc}$ ;  $\text{Ar} = \text{p-MeC}_6\text{H}_4$ ,  $\text{X} = \text{Cl}$ ,  $\text{OC}_6\text{H}_4\text{NO}_2$ -4) and olefins  $\text{MeO}_2\text{CCH}=\text{C}(\text{CO}_2\text{Me})\text{NHR}$  (5;  $\text{R} = \text{COC}_6\text{H}_3(\text{CF}_3)_2$ -3,5,  $\text{SO}_2\text{Ph}$ ). 4-Nitrobenzenethiol was oxidized by 0.5 equiv of 4 ( $\text{Ar} = \text{p-MeC}_6\text{H}_4$ ,  $\text{R} = \text{SO}_2\text{Ph}$ ,  $\text{R}' = \text{Me}$ ) to give bis(4-nitrophenyl) disulfide with a good recovery of triarylbismuthine ( $\text{p-MeC}_6\text{H}_4$ ) $3\text{Bi}$  and olefin  $\text{MeO}_2\text{CC}:\text{C}(\text{CO}_2\text{Me})\text{NHSO}_2\text{Ph}$ . On thermolysis at 200°, or when decomposed in the presence of a Cu catalyst at room temperature, the ylides  $\text{Ar}_3\text{Bi}:\text{C}(\text{CO}_2\text{MeR})\text{C}(\text{CO}_2\text{Me}):\text{NR}$  ( $\text{Ar} = \text{o-MeC}_6\text{H}_4$ ,  $\text{R} = \text{COC}_6\text{H}_4$ -4- $\text{NO}_2$ ;  $\text{Ar} = \text{o-MeOC}_6\text{H}_4$ ,  $\text{R} = \text{COC}_6\text{H}_3(\text{CF}_3)_2$ -3,5,  $\text{COC}_6\text{H}_4\text{CN}$ -4) bearing an N-aroyle group gave 2,4,5-trisubstituted oxazoles 7 (shown as I,  $\text{Ar}$  as defined above) and triarylbismuthines 6  $\text{Ar}_3\text{Bi}$  ( $\text{Ar} = \text{o-MeC}_6\text{H}_4$ ,  $\text{o-MeOC}_6\text{H}_4$ ) in moderate to excellent yields.
- IT 313974-17-3P, Dimethyl 2-[[3,5-bis(trifluoromethyl)benzoyl]amino]fumarate 313974-19-5P, Dimethyl 2-[[3,5-bis(trifluoromethyl)benzoyl]amino]maleate  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)
- RN 313974-17-3 CAPLUS
- CN 2-Butenedioic acid, 2-[[3,5-bis(trifluoromethyl)benzoyl]amino]-, 1,4-dimethyl ester, (2Z)- (CA INDEX NAME)

Double bond geometry as shown.



RN 313974-19-5 CAPLUS  
 CN 2-Butenedioic acid, 2-[[3,5-bis(trifluoromethyl)benzoyl]amino]-,  
 1,4-dimethyl ester, (2E)- (CA INDEX NAME)

Double bond geometry as shown.



REFERENCE COUNT: 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 22 OF 26 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 1992:470465 CAPLUS  
 DOCUMENT NUMBER: 117:70465  
 ORIGINAL REFERENCE NO.: 117:12419a,12422a  
 TITLE: Functionalization and chelating properties of a porous  
 polymer derived from vinylamine  
 AUTHOR(S): Tbal, Hamid; Delporte, Michele; Morcellet, Joelle;  
 Morcellet, Michel  
 CORPORATE SOURCE: Lab. Chim. Macromol., Univ. Sci. Tech. Lille,  
 Villeneuve d'Ascq, 59655, Fr.  
 SOURCE: European Polymer Journal (1992), 28(6), 671-9  
 CODEN: EUPJAG; ISSN: 0014-3057  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB A porous polymer containing vinylamine units was prepared by suspension  
 copolymn. of N-vinyl tert-Bu carbamate, styrene, and ethylene glycol  
 dimethacrylate in the presence of heptane, followed by hydrolysis of the  
 carbamate functions to obtain amino groups. This crosslinked polymer had  
 sp. surface area 16 m2/g, porous volume 1.32 cm3/g, and contained 3.75 meq/g  
 amino functions. It was then subjected to a series of chemical reactions in  
 order to introduce specific chelating ligands, viz. iminodiacetic  
 , aminophosphonic, thiourea, and dithiocarbamate. The chelating  
 properties of these functionalized polymers toward Cu and U were then

determined by the batch method. Most of them possessed high capacities compared to com. resins crosslinked with divinylbenzene.

IT 28497-66-7DP, hydrolyzed, functional derivs. 121876-39-9DP, hydrolyzed, functional derivs.

RL: SPN (Synthetic preparation); PREP (Preparation) (preparation and complexation of, with copper and uranium)

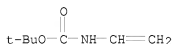
RN 28497-66-7 CAPLUS

CN Carbamic acid, ethenyl-, 1,1-dimethylethyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 7150-72-3

CMF C7 H13 N O2



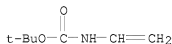
RN 121876-39-9 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,2-ethanediy ester, polymer with 1,1-dimethylethyl ethenylcarbamate and ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 7150-72-3

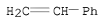
CMF C7 H13 N O2



CM 2

CRN 100-42-5

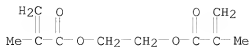
CMF C8 H8



CM 3

CRN 97-90-5

CMF C10 H14 O4



L18 ANSWER 23 OF 26 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1991:93978 CAPLUS

DOCUMENT NUMBER: 114:93978

ORIGINAL REFERENCE NO.: 114:15813a,15816a

TITLE: Complexing ability of a new type of bis-amidato ligand. Crystal structure of N,N'-bis(1-methyl-3-oxo-1-butenyl)oxamidatocopper(II) (CuL); spectroscopic and magnetic properties and redox behavior of CuL and the related nickel(II), cobalt(II) and cobalt(III) complexes

AUTHOR(S): Cros, Gerard; Gleizes, Alain; Laurent, Jean Pierre; Darbieu, Marie Helene

CORPORATE SOURCE: Inst. Nat. Polytech., Univ. Paul Sabatier, Toulouse, 31077, Fr.

SOURCE: Inorganica Chimica Acta (1990), 174(1), 33-40

CODEN: ICHAA3; ISSN: 0020-1693

DOCUMENT TYPE: Journal

LANGUAGE: English

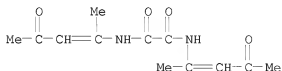
AB N,N'-Bis(1-methyl-3-oxo-1-butenyl)oxamide (LH2) and N,N'-bis(1-methyl-3-oxo-1-butenyl)isophthalamide (L'H2) comprising amido groups adjacent to unsatd. fragments were synthesized. While reaction of metallic ions with L'H2 results in breaking of the imine bonds, defined complexes of ML (M = Cu, Ni, Co) and CoL(py)+ were isolated. CuL crystallizes as monoclinic, space group P21/c, a 8.862(2), b 16.014(2), c 9.105(1) Å, β 97.54(1)°, Z = 4, R = 0.033, R' = 0.035. Intermol. Cu...O interactions lead to the formation of pseudo dimers. From the microanal. spectroscopic and magnetic data, polynuclear structures may be attributed to NiL.MeOH and CoL.3H2O whereas [CoL(py)2]ClO4 is likely a mononuclear species. The unexpected electrochem. behavior of these complexes points to a significant electronic transfer from the metal to the ligand resulting from the presence of a large π-system.

IT 36684-35-2P 132112-50-6P

RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)

RN 36684-35-2 CAPLUS

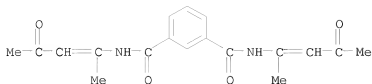
CN Ethanediamide, N1,N2-bis(1-methyl-3-oxo-1-buten-1-yl)- (CA INDEX NAME)



RN 132112-50-6 CAPLUS

CN 1,3-Benzenedicarboxamide, N1,N3-bis(1-methyl-3-oxo-1-buten-1-yl)- (CA INDEX NAME)





L18 ANSWER 24 OF 26 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1957:87469 CAPLUS

DOCUMENT NUMBER: 51:87469

ORIGINAL REFERENCE NO.: 51:158591,15860d-g

TITLE: Comparison of the effect of some antibiotics, antifungal substances, and phenylcarbamates on the growth of two vascular parasites in vitro  
Schneider, I. R.

AUTHOR(S): U.S. Dept. Agr., Beltsville, MD

CORPORATE SOURCE: Plant Disease Reporter (1957), 41, 436-41

SOURCE: CODEN: PLDRA4; ISSN: 0032-0811

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

AB Agar disks containing laboratory cultures of the imperfect stages of the 2 vascular

parasites *Ceratocystis ulmi* and *C. fagacearum* were placed on agar plates (Difco PDA agar for *C. ulmi* and bran extract agar for *C. fagacearum*) which had the antibiotics, antifungal agents, and phenylcarbamates (which are plant growth regulators, rather than antifungal agents) to be tested incorporated in the agar. Most substances tested were about as effective against one organism as against the other. Exceptions were endomycin, fradacin, pleocidin, gramicidin S, and cycloheximide (antibiotics) and propynyl phenylcarbamate. *C. ulmi* was not significantly inhibited by 5 times the concentration of cycloheximide that completely prevented growth of *C. fagacearum*. Pleocidin was also more inhibitory to *C. fagacearum*, while gramicidin S, endomycin, fradacin, and propynyl phenylcarbamate were more inhibitory to *C. ulmi*. Most active against both organisms were endomycin, fradacin, fungichromin, ascocin, candicidin, several derivs. of 2-pyridinethio 1-oxide (Olin Mathieson 1562, 1564, 1456, and 1484), mycostatin, iso-Pr (chlorophenyl)carbamate, 1-carboxyethyl (3-chlorophenyl)carbamate, iso-Pr (3-chlorophenyl)carbamate, Et and phenylcarbamate, 2-chloro-1-methylethyl phenylcarbamate. Growth of the fungi on transfer to fresh media not containing the chems. showed the action to be usually fungistatic. Some of the 2-pyridinethio 1-oxide derivs. and 2 phenylcarbamates were fungicidal, as was 25 times the min. inhibiting dose of cycloheximide.

IT 1393-38-0, Subtilin

(effect on vascular parasites)

RN 1393-38-0 CAPLUS

CN Subtilin (8CI, 9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

L18 ANSWER 25 OF 26 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1955:44866 CAPLUS

DOCUMENT NUMBER: 49:44866

ORIGINAL REFERENCE NO.: 49:8606h-i,8607a-h

TITLE: Green substantive anthraquinone dyes  
 PATENT ASSIGNEE(S): Sandoz Ltd.  
 SOURCE: Addn. to Brit. 692,513 (C.A. 49, 2082e)  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Unavailable  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	GB 713580		19540811	GB 1952-9958	19520421
GI	For diagram(s), see printed CA Issue.				
AB	<p>Green substantive anthraquinone dye mixts. are prepared by the method of the main patent by condensing a blue anthraquinone dye with a yellow azo dye by means of fumaroyl dichloride (I) or a substitution product thereof. The condensation product (II) 5.65 from 1-amino-4-bromo-2-anthraquinonesulfonic acid with 4,4'-diamino-biphenyl-3-sulfonic acid dissolved together with p-(p-H2NC6H4N:N)C6H4SO3H (III) 2.8 in H2O 400 by means of 29% aqueous NaOH 4.8, the solution treated dropwise at 0-3° with I 1.6 while maintaining the pH of the mixture at 4.5-5 by the simultaneous addition of 10% aqueous NaOH about 9, the mixture adjusted with 10% aqueous NaOH 2 to pH 7.5</p> <p>and</p> <p>salted with NaCl 12 parts, and the precipitate filtered in the cold and dried gave a green powder, green in H2O, which dyed cotton and regenerated cellulose fibers nice green tints of good light- and wash-fastness. This dye was separated by chromatog. into N-[4'-(4-amino-3-sulfo-1-anthraquinonylamino)-2-sulfobiphenyl]-N'-[4-(4-sulfophenylazo)phenyl]fumaramide (green component), N,N'-bis[4'-(4-amino-3-sulfo-1-anthraquinonylamino)-2-sulfobiphenyl]fumaramide (bluish green component), and N,N'-bis[4-(4-sulfophenylazo)phenyl]fumaramide. The Li salt 5.8 of the condensation product from 1-amino-4-bromo-2,6-anthraquinonedisulfonic acid with (p-H2NC6H4)2 and the Li salt 2.85 of III in H2O about 500 treated dropwise at 0-4° with I 1.6 in CC14 20 parts while maintaining the pH of the mixture at 5.8-6.2 gave similarly a green powder, yellowish green in H2O, which dyed yellowish green tints. II 6.1 and 4-(4-amino-2-methyl-phenylazo)azobenzene-3,4'-disulfonic acid (IV) 5.2 parts condensed as the Na salts in H2O 600 at 0-3° with I 1.2 parts by volume gave a dark-green powder which dyed yellowish green tints. A similar dye was obtained with methylfumaroyl dichloride 1.3 parts. Chlorofumaroyl dichloride 1.3 or bromofumaroyl dichloride 1.4 parts gave similarly bluish-tinged green dyes of similar fastness properties. II 5.7 and 4-(4-amino-2-methylphenylazo)-3'-carboxy-2'-hydroxy-5'-sulfobenzanilide (V) 4.75 dissolved with Li2CO3 0.9 in H2O 600 and treated at 0-3° with M maleic acid dichloride (VI) in CC14 11 parts while maintaining the pH at 6.8 to 8 gave a dark-green powder which dyed green tints of good light- and wash-fastness. After treatment of the dyeings with salts of Cu, Cr, Ni, Co, Fe, or Mn did not change the shade appreciably, but improved the fastness properties, especially the fastness to H2O. Coppering also improved the light-fastness. Maleic anhydride heated with PCl5, the POC13 distilled off, and the residue of I and VI fractionated gave the desired VI. 1-Amino-4-(4-aminoanilino)-2-anthraquinonesulfonic acid (VII) 4.1 and 2-(4-amino-2-acetamidophenylazo)-4,8-naphthalenedisulfonic acid 4.7 parts gave with I 0.4 part a dark powder which dyed full-green shades. Similar dyes were prepared in this manner by coupling by means of I the following components (shade of dyeing of the</p>				

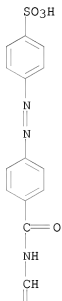
resulting dye on cotton and regenerated cellulose fiber given): VII 4.1, IV 5.2, green; di-Na 1-amino-4-(p-aminoanilino)-2,6-anthraquinonedisulfonate 5.35, Na salt of N-(p-aminobenzoyl) derivative (VIII) of IV 6.9, yellowish green; VII 4.1, VIII 6.0, full-green; VII 8.2, III 5.6, pure-green; II 6.1, 4-amino-3,2'-dimethylazobenzene-4'-sulfonic acid (IX) 3.3, vivid-green; VII 4.1, 1-(p-amino-phenyl)-3-methyl-4-(2-carboxy-4-sulfophenylazo)-5-hydroxypyrazole (X) 4.2, pure-green; II 5.7, X 4.2, pure-green; II 5.7, 4-amino-3'-carboxy-4'-hydroxyazobenzene (XI) 3.1 yellow-tinged green (aftertreated with Cu, Ni, Co, Cr, Mn, and Al salts the shade was shifted slightly towards yellow); VII 4.1, XI 3.1, yellowish green; VII 4.1, XII 7.4, yellow-tinged green; mixed 1-amino-4-(4'-aminobiphenylamino)-2,5- and 2,8-anthraquinonedisulfonic acid (XIII) 5.7, XII 7.4, yellow-tinged green; XIII 5.7, 6,7-di-Cl derivative of II 6.4, yellowish green; XIII 5.7, 7-Cl derivative of II 6.1, yellowish green; XIII 5.7, 7-Br derivative of II 6.5, yellowish green; 1-amino-4-(4-amino-x-methoxyanilino)-2-anthraquinone-sulfonic acid (XIV) 4.5, X 4.2, green; x-Me analog of XIV 4.3, X 4.2, bluish green; VII 4.1, V 4.7, green; and VII 4.1, IX 3.05, green.

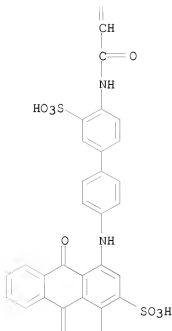
IT 859335-69-6, 2-Anthraquinonesulfonic acid, 1-amino-4-[3'-sulfo-N'-(3-p-(p-sulfophenylazo)phenylcarbonyl)acryloyl]benzidino]-(in dye mixture)

RN 859335-69-6 CAPLUS

CN 2-Anthracenesulfonic acid, 1-amino-9,10-dihydro-9,10-dioxo-4-[[4'-[[1-oxo-3-[[4-(2-(4-sulfophenyl)diazenyl]benzoyl]amino]-2-propen-1-yl]amino]-3'-sulfo[1,1'-biphenyl]-4-yl]amino]- (CA INDEX NAME)

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L18 ANSWER 26 OF 26 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1922:6195 CAPLUS

DOCUMENT NUMBER: 16:6195

ORIGINAL REFERENCE NO.: 16:1079f-i,1080a-i

TITLE: Oxalic acid derivatives of "diacetonitrile"

AUTHOR(S): Benary, E.; Schmidt, M.

SOURCE: Berichte der Deutschen Chemischen Gesellschaft

[Abteilung] B: Abhandlungen (1921), 54B, 2157-68

CODEN: BDCBAD; ISSN: 0365-9488

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

GI For diagram(s), see printed CA Issue.

AB The work on  $\text{MeC}(\text{NH}_2):\text{CHCO}_2\text{Et}$  (A) (C. A. 11, 2786) showed that treatment with acid chlorides in  $\text{C}_6\text{H}_5\text{N}$  gives C- or N-derivs., depending on the nature of the chloride, while the Na derivative of A with esters always gives only N-derivs. The investigation has been extended to "diacetonitrile,"  $\text{MeC}(\text{NH}_2):\text{CHCN}$  (B), to determine the influence of a CN instead of a  $\text{CO}_2\text{Et}$  group on the introduction of acid residues. E. v. Meyer believed that the products obtained by the condensation of "dinitriles" with esters in the presence of  $\text{NaOEt}$  or  $\text{KOEt}$  are all C-derivs. (C. A. 8, 3045) and as this is contrary to B.'s results, v. M.'s work has been repeated. The product of the condensation of B with  $(\text{CO}_2\text{Et})_2$  in the presence of  $\text{NaOEt}$  is really, as

was thought probable by Fleischhauer (J. prakt. Chemical 47, 391(1893)), the N-derivative, N-ethoxalylidiacetonitrile,  $\text{MeC}(\text{NHCOCOEt})\text{:CHCN}$  (C), for with  $\text{PhNHNH}_2$  it yields a phenylhydrazide,  $\text{MeC}(\text{NHCOCOHNHPh})\text{:CHCN}$  (D), which is decomposed by acids into  $\text{PhNHNHCOCOEt}$ . On the other hand, with  $\text{ClCOCOEt}$  in  $\text{C}_5\text{H}_5\text{N}$ , B gives the C-derivative,  $\text{MeC}(\text{NH}_2)\text{:C}(\text{CN})\text{COCOEt}$  (E), which with 2 mols.  $\text{PhNHNH}_2$  gives  $\text{H}_2\text{O}$ ,  $\text{NH}_3$ ,  $\text{EtOH}$  and 1-phenyl-3-methyl-4-cyanopyrazole-5-carbox-N $\beta$ -phenyl-hydrazide (F),  $\text{PhN}\cdot\text{N}:\text{CMe}\cdot\text{C}(\text{CN})\text{:COCNHNHPh}$ , which reduces Fehling solution but does not split off  $\text{PhNHNH}_2$  by the usual methods; alkalis convert the CN into a  $\text{CO}_2\text{H}$  group, giving an acid (G) identical with that obtained earlier by saponification of the product resulting from the action of  $\text{PhNHNH}_2$  on  $\text{MeC}(\text{NH}_2)\text{:C}(\text{COCOEt})\text{CO}_2\text{Et}$  (H) but whose structure had not been determined. With  $\text{KMnO}_4$  in  $\text{Me}_2\text{CO}$ , F gives 1-phenyl-3-methyl-4-cyanopyrazole-5-carboxylic acid (I), which is saponified to the known 4,5-( $\text{CO}_2\text{H}$ ) $_2$  compound. The product m.  $147^\circ$  earlier obtained from H and  $\text{PhNHNH}_2$  was therefore ethyl 1-phenyl-3-methylpyrazole-5-carboxphenylhydrazide-4-carboxylate. Attempted saponification of E with alkalis does not give the expected acid

(J);

there is considerable cleavage to  $\text{NH}_3$  and  $(\text{CO}_2\text{H})_2$ . Concentrated  $\text{HCl}$  yields a substance (K) which has the composition of J but which shows no acid properties. As it seemed probable that J, first formed, isomerized under the influence of the coned. acid,  $\text{MeC}(\text{NH}_2)\text{:C}(\text{CN})\text{COCOHNH}_2$  (L) was boiled with  $\text{H}_2\text{O}$ , which slowly converted it into the  $\text{NH}_4$  salt of J, from which the Cu salt was obtained by precipitation with  $\text{Cu}(\text{OAc})_2$  and this with  $\text{H}_2\text{S}$  gave the free J; J is an enol., giving an intense red color with  $\text{FeCl}_3$ , and rearranges with extreme ease, on warming in  $\text{H}_2\text{O}$ , into the neutral K,  $\text{MeC}(\text{NH})\text{CH}\cdot\text{C}(\text{NH})\cdot\text{O}\cdot\text{O}\cdot\text{CO}$ ; conversely, K allowed to stand some time with dilute  $\text{NH}_4\text{CH}$  changes into J, while  $\text{NaOH}$  splits off  $\text{NH}_3$  and  $(\text{CO}_2\text{H})_2$ . D, yellowish needles from alc., m.  $192^\circ$  (gas evolution), gives a violet color in concentrated  $\text{H}_2\text{SO}_4$  with  $\text{FeCl}_3$ , reduces hot Fehling solution. C-Ethoxalylidiaceto-nitrile (E), long needles from  $\text{EtOH}\cdot\text{H}_2\text{O}$ , m.  $114\text{--}5^\circ$ , stable when pure but quickly decomps. if contaminated with adhering  $\text{C}_5\text{H}_5\text{N}$  (yield, 66%), gives no color in alc. with  $\text{FeCl}_3$ , converted by alc.  $\text{NH}_3$  almost quant. into diacetonitrile-C-oxalamide (L), needles from  $\text{H}_2\text{O}$ , begins to char  $195^\circ$ , decomps. into  $\text{NH}_3$  and  $(\text{CO}_2\text{H})_2$  on standing in N  $\text{NaOH}$ ; anilide, from E and  $\text{PhNH}_2$  in alc., yellow leaflets from  $\text{AcOH}$ , chars  $203\text{--}7^\circ$ , gives an intense violet color with concentrated  $\text{H}_2\text{SO}_4$  and  $\text{K}_2\text{Cr}_2\text{O}_7$ , is unchanged by boiling 0.5 hr. with concentrated  $\text{HCl}$ . Diacetonitrile-C-oxalic imidolactone (K), best obtained (yield, above 60%) by shaking E a few min. with concentrated  $\text{HCl}$ , hexagonal pyramids from dilute  $\text{AcOH}$ , begins to char  $230^\circ$ , insol. in  $\text{Na}_2\text{CO}_3$ , soluble in  $\text{NaOH}$  with formation of  $\text{NH}_3$  and  $(\text{CO}_2\text{H})_2$  (if immediately acidified a part ppts. unchanged), soluble in aqueous  $\text{NH}_4\text{OH}$  after several days without loss of  $(\text{CO}_2\text{H})_2$  and repptd. unchanged by  $\text{HCl}$ , can also be obtained from L with concentrated  $\text{HCl}$ , gives with  $\text{PhNH}_2$  in boiling dilute  $\text{AcOH}$  the

N-phenyl

derivative, golden yellow leaflets from  $\text{AcOH}$ , m.  $236^\circ$ , insol. in  $\text{Na}_2\text{CO}_3$ , gives no color in alc. with  $\text{FeCl}_3$ . Diacetonitrile-C-oxalic acid (J), yellowish hygroscopic crystals from absolute alc., quickly deliquesces in the air; ammonium salt, quadrangular prisms with 1  $\text{H}_2\text{O}$  from  $\text{H}_2\text{O}\text{--}\text{EtOH}$ , chars  $180\text{--}220^\circ$ ; silver salt; copper salt, green. F (yield, about 72%), seps. from alc. in rectangular leaflets, m.  $207^\circ$ , gives a violet color in concentrated  $\text{H}_2\text{SO}_4$  with  $\text{FeCl}_3$ , reduces hot Fehling solution, converted by boiling 10%  $\text{NaOH}$  into 1-phenyl-3-methyl-pyrazole-5-carboxphenylhydrazide-4-carboxylic acid (G), needles from dilute alc., m.  $253^\circ$ , reduces hot Fehling solution I seps. from very dilute alc. in quadrangular prisms, m.  $211\text{--}2^\circ$  with loss of

CO<sub>2</sub> and formation of 1-phenyl-3-methylpyrazole-4-nitrile, 4-sided prisms from MeOH, m. 193-4°. In the course of the present work was also prepared β-keto-butyronitrile-α-oxalamide diphenylhydrazone, MeC(:NNHPh)CH(CN)C(:NNHPh)-CONH<sub>2</sub> (from L and PhNHNH<sub>2</sub> in boiling alc.), long needles from alc., m. 232°, does not reduce Fehling solution, is unchanged by boiling with 50% AcOH or concentrated HCl. 1-Phenyl-3-methyl-4-cyanopyrazole-5-carboxanilide, from MeC(NH<sub>2</sub>):C(CN)COCONH-Ph and PhNHNH<sub>2</sub> in boiling alc., needles from dilute alc., m. 167-8°, gives an intense violet color in coned. H<sub>2</sub>SO<sub>4</sub> with K<sub>2</sub>Cr<sub>2</sub>O<sub>7</sub>, is not changed by boiling in AcOH with PhNHNH<sub>2</sub>. With PhNHNH<sub>2</sub> in AcOH, both L and MeC(NH<sub>2</sub>):C(CN)COCONHPh yield F.

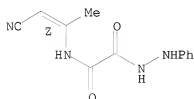
IT 1086248-71-6P

RL: SPN (Synthetic preparation); PRP (Properties); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(Oxalic acid derivatives of "diacetonitrile")

RN 1086248-71-6 CAPLUS

CN Acetic acid, 2-[[[(1Z)-2-cyano-1-methylethenyl]amino]-2-oxo-, 2-phenylhydrazide (CA INDEX NAME)

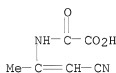
Double bond geometry as shown.



IT 861801-85-6, Oxamic acid, N-(β-cyano-α-methylvinyl)-  
(derivs.)

RN 861801-85-6 CAPLUS

CN Acetic acid, 2-[(2-cyano-1-methylethenyl)amino]-2-oxo- (CA INDEX NAME)



=> log h

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION

FULL ESTIMATED COST

150.36	534.53
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DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION

CA SUBSCRIBER PRICE

-21.32	-21.32
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SESSION WILL BE HELD FOR 120 MINUTES

STN INTERNATIONAL SESSION SUSPENDED AT 19:42:09 ON 10 MAY 2009